

5G causes COVID and Other Reasons to Turn Off the Internet

By Jack Heart

[Editor's preface to this article: I came upon the following article from one of the most unlikely sources for technical information about **5G**. Nonetheless its source of technical insight from a person working inside the military for years has been able to differentiate between the differences that help the typical lay person to grasp why it is that wireless technology is becoming more of a threat to life form as it has been rolled out in the past year or so in the U.S. Unfortunately, science and technology is not topics of concern by the public, who more and more tend to buy the industry's products without ever thinking twice how these devices are harmful.

Once addicted to the marketing promises of technology, it becomes too late for many to turn back the clock. I once was the pastor of a church where my administrative board almost pressured me into getting a cell phone. Where it not for the fact that I checked my answering machine hourly or close to it when out on the road they might have succeeded. I even had a church secretary as a backup. With a large congregation, it was routine to have members in a half-dozen hospitals scattered from Louisville, Lexington, Frankfort, and Danville, KY all on the same day. I would not have a cell phone today but age, failing health and heart issues required me to capitulate to my family concerns.

This article opens up for readers' important aspects and distinctions that sort out some of the details of why wireless energy is as harmful as it is. The former military expert clarifies critical things to know and consider regarding life. At the close of the article I will further illustrate key issues as to how our lives are being changed. At this point in time, **Covid-19 is simply a euphemism for radiation poisoning.** We need to understand that the human body is a complex composite of biology-chemistry-electricity. The book of Genesis teaches that God took "*the dust of the ground,*" a heap of chemicals, shaped a man and then blew into his nostrils the breath of life. Then man became a living soul. Human beings are different from animals, for "*God created man in his own image*" -(Genesis 1:27). Our bodies have been designed with the ability to pass on to the next generation the programmed information required to form another person from simple chemicals.]

.....
By Jack Heart

When we write on the occult I am the expert, consequently that is what we write about but recently subjects are coming up for all of you that need to be addressed. I'm going to take time off from my own pet project which is the Khazar-Nazi Antichrist to do just that. This is the first installment. I am by no means an expert on frequencies but it just so happens that "Phil," who has been a member of the Jack Heart team since its

inception in 2014 is just that, twenty-five years working with them in a military intelligence capacity. He will explain **5G** to you, and I will explain to you what you should really be worried about.

With the advent of the COVID virus and the West's assisted suicide at the hands of the World Health Organization and political leadership epitomized by the nightly Donald Trump Show much ado is being made about the implementation of **5G** in America. The bulk of it if not all of it, at least in America, traces back to former Vodafone employee Joe Imbriano; a man who professes to believe "*god created the earth and the heavens in seven days...*"⁽²⁾ [This statement about Joe Imbriano is incorrect but it is true that a former Vodafone employee did blow the whistle two years ago.] [[The UK media quickly exposed the voice on the video and to debunk the video.

Click on link to watch video: [5G and Coronavirus Exposed by ex Vodafone Boss](#)

Two years ago, the UK '*Guardian*' reported that Jonathon James was the voice on the video. Vodafone sources say he was hired for a sales position in 2014 and left after a year. A recording spread around the world at the end of March, purportedly featuring a former Vodafone executive claiming to let the public in on a secret that the coronavirus pandemic is cover for a global plot to install **5G** mobile phone masts, track the world's population through vaccines, and then destroy human society as we know it. The *Guardian* revealed that the voice on the tape making the baseless claims is an evangelical pastor from Luton who recently tried to convince Zimbabweans to use cryptocurrency in their economy.

Jonathon James, who regularly preached at churches in Bedfordshire, is the previously unidentified individual who reached millions of people with his detailed but nonsense claims that Covid-19 is a fake disease covering for the impact of **5G**.

"It has nothing to do with biological warfare but is our bodies reacting to radiofrequency radiation," he told listeners to the 38-minute recording, claiming the real cause of global deaths was new mobile technology causing cell poisoning. *"They are using coronavirus to try to hide the fact that people are dying from the **5G** frequency."*

Although James was not the first individual to attempt to connect the pandemic and **5G**, the popularity of his recording grew at the end of March 2000, just as people believing the conspiracy theory began to burn down phone equipment and harass telecoms engineers.

In the recording he suggests that Bill Gates is involved in a plot to produce coronavirus vaccinations that will contain computer chips to track individuals, a move he claims will ultimately herald the destruction of society.

We are not surprised by the UK '*Guardian*' refuting the video, as the content of the video is credible and verifiable from a wide range of sources. Two years hence the

content of the video has not been disproven, rather it has unfolded as the former Vodafone first predicted.]]

It only gets worse after that, one could call it junk science or pseudoscience but that would be giving it more validity than it's worth. Science has nothing to do with it. This is an exercise in bible thumping being applied to the root of empirical science.

The reality of the world we live in begins with a Mathematical Theory of Communication, a two-part article by Bell mathematician Claude Shannon appearing in the 1948 July and October issues of the Bell System Technical Journal. Shannon begins by saying: *"The fundamental problem of communication is that of reproducing at one point, either exactly or approximately, a message selected at another point."* (3)

Shannon's paper would become the foundation of Information Theory; a variation of John von Neumann's Game Theory. Information Theory deals with the quantification, storage, and communication of information. Information Theory is used in quantum computing, artificial intelligence, cybernetics, neuroscience, electrical engineering and black hole calculations...

Sciences most efficient way to solve Shannon's *"fundamental problem"* is through wireless communication, using frequencies to broadcast information.

The mathematical calculations required for understanding the interaction of frequencies are beyond the education of most laymen. But that does not excuse ignoring what is right in front of you. It's spring and in every backyard in America birds chatter enthusiastically as they go about their business breeding and building nests. They are not falling out of the air dead as Dr. Frankenstein orders Igor to power up his fiendish **5G** system.

American Fundamentalist Christians live in a bizarre comic book world which does not lend itself to Holographic paradigms, Fourier transforms and Biological warfare. They insist **5G** will interfere with the absorption of oxygen by their blood and as evidence they cite fifteen year old experiments done with 60 GHz forming oxygen absorption bands in free floating atmospheric molecules. [[Put aside his Christian bias while you absorb what he has to say about the proven evidence on issues of **5G**]]

Hemoglobin, blood, an entirely different story, is never mentioned once in the fourteen page paper intended for industry scientists working in the field of *"earth atmosphere remote sensing, microwave wireless communication and industrial applications..."* (4)

Big business has been expressing interest in communication systems operating at 60 GHz for at least twenty years now. Licensing by the FCC can be less regulated, costly local auctions for limited airwaves avoided, interference minimized and speedy dispersal of information maximized. *"Theoretically, 100,000 systems operating at 60 GHz can be co-located in a ten square kilometer area without interference problems."* (5)

Information is the most valuable commodity there is. It always has been. As the old Jewish proverb goes “give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime.” The trade in information is highly competitive and because it has already implemented **5G** China now has a tremendous advantage in its economic war with America.

Globalist corporations are seeking technological parity with China, they are not looking to despoil and corrupt the precious bodily fluids of “God fearing” Christians, there’s no money in it. Having said that this is by no means an endorsement of **5G** technology, millions of networks broadcasting on frequencies at best loosely licensed and regulated by the FCC could lead to all kinds of nefarious activity.

Phil, not his real name, is an intelligence specialist with over a quarter century experience in military applications for wireless communications. I’m a layman when comes to understanding frequencies. Phil is a professional, and he has been good enough in his time off to write this short essay telling you exactly what 5G can and cannot do. I have emphasized in bold some of the most pertinent passages. You will see why when you read the last part.

*“I have done quite a bit of searching and analysis of the recent radio engineering and medical studies and treatises regarding **5G**. In the world today there are a lot of empirically measured resonant frequencies at the atomic, molecular and cellular levels although most requires a bit of unit conversion from the measurements used in the documents to a common form of wavelength or resonant frequency measurement.*

*Bottom Line: **5G** is not really so different from all the previous cellular digital communications systems in terms of the frequency ranges it operates in, the carrier power and means by which communications is carried out. The major difference on the surface is that the **5G** systems have the ability to change antennas on the same tower to make sure that the receiver, whether cell phone, watch, automobile or human gets the signal at the strongest strength.*

This is how the engineers have dealt with the issue of signal losses over distance. A quick note here, the strength of an electromagnetic wave drops by the inverse of the square of the distance to receiver.

Can the electromagnetic radiation from digital cellular communication systems cause damage to living cells? Yes, so can any EM radiation regardless of source. You can get sun burned right?

Are the new 5G systems designed to do so from the outset? I don’t think so. Not at the developer or manufacturer level.

Could the carrier or signal be manipulated so as to affect individuals, individual types of cells, or a particular population? Yes, the nefarious could design a transmission (again

regardless of the type of signal AM, FM, 3G, 4G or 5G) that can increase the odds of the signal having the desired effect upon an organism or atom.

We are all familiar with what a wave is. One thing we must remember about waves is that by definition waves, either like those you can see on the surface of water or electromagnetic, repeat themselves over time. The time it takes for a wave to repeat itself is called wavelength.

SYMPTOMS OF 5G EXPOSURE VS. CORONAVIRUS INFECTIONS

SYMPTOM	5G	CORONAVIRUS
Sperm / Testicular Damage	✓	✓
Neuropsychiatric Damage	✓	✓
Cellular DNA Damage	✓	✓
Apoptosis (Cell Death)	✓	✓
Cardiac / Blood Pressure Disruptions	✓	✓

NATURALNEWS.COM
Defending Health, Life and Liberty

The other side of this and what we often hear is frequency. This is another measure of the wave's form; it is the number of times a wave repeats itself in a given amount of time, and usually measured waves or cycles per second, called a hertz.

Electromagnetic waves travel at the speed of light and they follow well proven classical physics principles thus they are measurable. The measurement of energy in a wave is called amplitude. And for the last of the definitions; the instantaneous measure of where the wave is in its cycle is called the phase.

Qualifier: For this discussion we will not get into the quantum physics calculations or theories which would confuse the dialogue. Just bear in mind that at the quantum or sub atomic level it has been shown that influencing a free electron which has been separated from an atom somewhere else in the universe can be influenced instantaneously by an action upon, or a resonant frequency shift in, a paired electron somewhere else in the universe.

When 5G waves interact with human DNA or other parts of miniscule cells there is attenuation or absorption of a tiny amount of energy from the 5G wave. This interaction results in the release of energy from the travelling wave to that which it "hits". In the case of cells or parts of cells i.e.: a DNA strand, that energy into the system or cell must necessarily be dissipated in some way so the affected waveform can return to its normal state of equilibrium and operation. In DNA it has been shown that absorbed electromagnetic energy results in a minute amount of UV energy radiation out from the DNA strand.

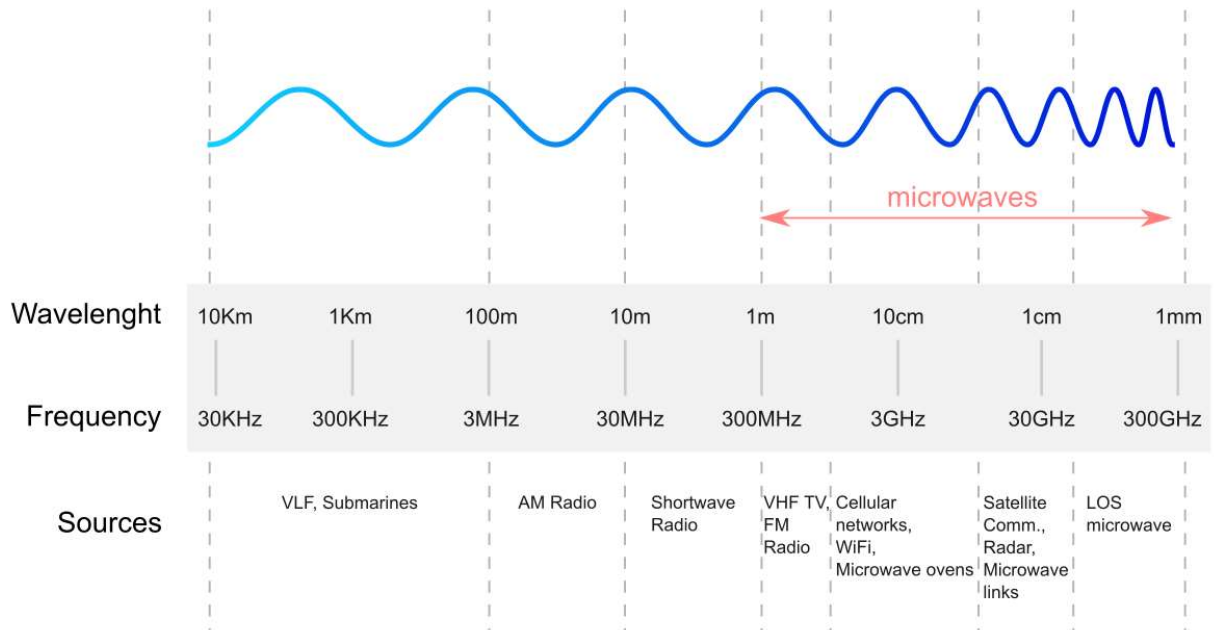
The amount of interaction/attenuation of the travelling wave is affected by the instantaneous magnetic dipolar field of an electron or in other words the electron's position relative to the nucleus when the interaction with outside wave occurs. The phase of an electron, where it is in the orbit, around a nucleus, is one of the major determinants of the outside wave effect on the electron and the atom. This same applies when you start getting into combined waveforms that we call the molecules of the DNA strand or individual DNA proteins."

Where and how long the outside wave interacts with the complex wave of a DNA strand will determine how much of an effect the wave has on DNA. Outside wave energy is often so small by the time it makes it through the filtering or dampening of "tissue" or even the air that there is then little energy to impart inside a cell.

There is much going on in this field. The Rife machines of yesteryear are now modern spectrometers and electron microscopes.

The thing that people have a hard time grasping is that the shorter the wavelength, or higher the carrier frequency. The wave travelling at the speed of light, with a very minute wavelength, takes very little to be knocked off course or the energy of the wave absorbed or transferred to another waveform, such as an oxygen molecule while travelling through the space between the transmitter and receiver.

Repetition and error detection/correction must be built in to the systems to aid in getting the message transmitted correctly.

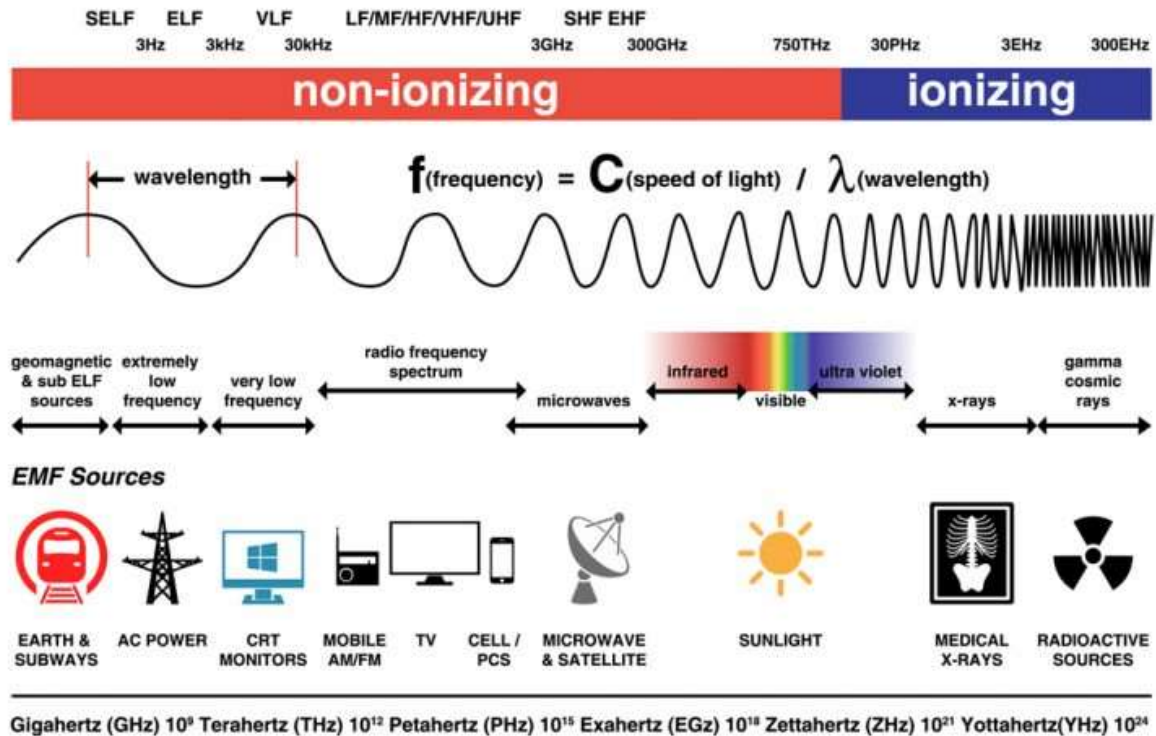


When we are talking **5G** some of the carrier wave frequencies are way up there, meaning minuscule wavelengths, almost in the visible light range. With this being the case it doesn't take much interaction with other waves, solids, gases, etc. to eat up the energy of the travelling wave; a collision with a carbon dioxide molecule can and does have an effect on the travelling wave.

That being said the wavelengths of the particles, atoms, DNA strands, cells, components (bones, organs etc.) all are going to have different combined complex electromagnetic waveforms of their own. The larger the conglomeration, the lower the resonant frequency of the whole.

This is why very low frequency waves were, and are, used in Rife and other resonant or sound based healing. Studies show the human body has a resonance between 5 and 10 hertz. The planet itself has a resonant frequency, or in other words the planet vibrates continuously at 7.42 cycles per second. This is known as the Schumann Resonance. The lower frequencies are heard and felt and affect a larger number of cells by bringing them into sympathetic resonance with the frequency of the influencing wave. Although the **5G** signal does impart some energy into the body it will be in very few cells at any given time. Does that mean it won't cause cancer? No, it could and might cause damage but the odds are low due to received transferred energy being low. If there is damage it will either manifest as a latent problem in a few cells the body will take care of, or will cause cell death in a few cells, and again the body will take care of it.

THE ELECTROMAGNETIC SPECTRUM



The recently posted video [Out of Shadows](#) at 1:17 says the use of Very Low Frequency waves piggybacking on carrier waves is a form of mind control. This statement may be correct and goes into my next consideration about **5G** and radio transmissions in general.

Basically any electromagnetic wave of energy can have an effect on any other electromagnetic body. And of course electromagnetic waveforms are what make up the entire universe we find ourselves in. For an electromagnetic wave to have effect on a living being the transmitted wave must be near the resonance frequency of the body to be influenced, or of significantly high energy.

Communications transmitted over electromagnetic signals do not often match up cleanly with resonance of human cellular functions. Therefore if one wished to influence something's resonant frequency then the signal from the antenna must be "shaped".

A demonstration of resonance might be in order here. Place two tuning forks within a foot of one another. Strike one and the other will feel the wave and begin to vibrate too. If the note, or natural frequency, of the tuning forks are too far apart on the scale the passive will have little inclination to begin to resonate at the frequency of the one struck.

The “shaping” of a wave is so that when the signal is received there are other signals within the transmitted waveform which are perceived at the receiver as close enough to the natural frequency to cause the receiver to resonate with the new received signal.

This shaping can be done through the use of repetitive patterns influencing (modulating) the carrier which then produces harmonics, which are positive or negative waves at integer multiples of the wavelength (cycle) of the packet of energy influencing the carrier wave. By changing the packet length one can change the harmonics and move them on the scale so that the harmonics are the desired frequency to more likely induce resonance.

For humans it was shown many years ago that the best, most penetrating carrier wave to penetrate the human body is in the 5 megahertz range. This is a 1000 times larger wavelength than the 3G, 4G or 5G carriers. Although the wave that kills a “virus” or bacterium is more likely to be in the 2 to 10 hertz range.

This is not to say that DNA cannot be receiving signals and be influenced by waves in the nano-meter wavelength. A full uncoiled human DNA strand of roughly 2 meters in length and has a resonant frequency range similar to the current wireless device’s operating frequency range.

The issue that is the elephant in the room is not will 5G kill but how to program the “wave”, any wave, to interact with a given “living” organism without being caught. Those with money to hire an eclectic group of scientists likely could do it. Is it intentional on the part of the manufacturers wanting to sell bigger, better, faster....perhaps but not likely because any legitimate public funding would dry up.

I’ve been considering the issue since the first time I went to work around a microwave (GHz range) communications system. I heard about birds flying in front of antennas and being struck down, dead in flight. My first thought was that since it was a microwave system the bird got zapped like a piece of chicken in the microwave oven.

Using this analogy I believe one can better explain how microwaves have their affect. It is not that the high power electromagnetic signal influences programming within the cells so much as the closer to the source of transmission the more the exposure to energy of the transmitted wave.

This electromagnetic energy imparts HEAT when the wave encounters something. The wave sets whatever it encounters to vibrating and the vibration causes heat. That is why microwave food gets hot. Or how DARPA used HAARP to heat the ionosphere! The waves impart energy upon the object, in this example a bird or atoms in the sky. The heat is what kills, not the wave’s frequency or wavelength.

The electronic systems manufacturer’s technical aspects and mathematics do not rule out unintended damage to humans. The use of electromagnetic waves to influence a human in some way from 5G or other communications systems using electromagnetic

energy (radio, TV, computers, auto engines, etc.) is another consideration. **The near instantaneous transmission of electromagnetic signals from one synapse to another in the brain can certainly be influenced by outside sources.**

An example is how difficult it is to think after having eaten a high carbohydrate meal. The brain wave measurements indicate that the operating state has changed. Biologists say it is due to the chemistry changing, a physicist will explain that the ingested food contains billions of particles each operating at its own frequency.

If the wave form from an ingested food molecule is at or near the resonant frequency of the operating frequency of a brain cell it can shift the operating frequency of the brain. The same occurs with the sense of hearing or sight. When one finds themselves in a temple with low frequency bells or gongs struck repetitively the repetition rate of the striking of the gong and the repetition rate of the sound wave both have an influence on the body and the brainwave measurements.

For another example think about influences from a concert or large gathering, hand clapping and music at a particular rate (frequency) is shown to cause euphoria or nausea. This is another case of influencing the natural resonant state of the being.

Flashing lights can also have influence on brain waves. This condition of changing an operating frequency to another through outside influence is called entrainment.

Back to 5G or the 5th generation cellular communications question. Does the complex waveform influence people? Out of the box it is likely to have an influence in similar ways as the sun, the wind, the sea, and the universe's complex waveforms.

Can the complex waveform of a created and transmitted electromagnetic waveform cause people to hear voices or experience odd thoughts, sickness, euphoria, depression, suicidal thoughts?

Potentially; through the specific construction of a transmitted complex wave's housekeeping and test signals the cells and electrical functions of a body, brain, DNA molecule, virus or bacterium can be caused to change state. This is also greatly influenced by the signals strength. Too much everything burns up, too little it cannot overcome the receivers own energy fields.

Does the **5G** have a greater ability to cause effects? In the system's narrowing of the transmission to a 15 degree beam from the antenna it ensures that the greatest signal strength is always being received at the cell phone, watch, or other "connected" device. Thus we see the amount of energy available for data transfer as greater in this system.

This is the main factor and difference in the new generation of electromagnetic data transmission; higher power at the receiver for greater clarity and speed of communication. The complex electromagnetic waveform is everywhere within the 15

degree beam of energy being transmitted from the antenna, if you are in the beam you receive the signal the same as your phone.

Here is my tin foil hat conclusion. Given the GPS location data built in to cellular communications system and the knowledge that a target is likely attached to a particular device at a particular location a bad actor could, with enough resources, devise a complex electromagnetic signal for transmission to the location of the targeted network connected device that could cause some form of an effect on anything that is within the influence of the transmitted signal. This of course is unknown to the individual holding the cell phone.

Here is the engineer's conclusion. The system is designed as all forms of communications. It is designed to build a two way link between two stations giving the transmitter the ability to share data, observations and comments with the receiver with minimal errors and maximum reproduction of the transmitted thought, idea, or datum.

The significant difference in this system is that instead of shouting to the world in all directions the transmitter is shouting through a narrower 15 degree slice created by the antenna. It is like using a bullhorn to make sure those who need to hear do so.

The final thoughts: The military industrial complex has the resources to make every man, woman and child a puppet on a string through manipulation and transmission of electromagnetic energy into complex waves. This has been the case since the first radio advertisement went out over "wireless" in the 19th century.

They have increased the ability in the last several years. Did that same bunch of scientists use complex electromagnetic wave forms to open portals in the EM fabric of the universe or do they overwrite the waveforms of reality? It likely is theoretically feasible..." – Phil

Affiliating western corporate fanaticism, motivated entirely by greed, for 5G technology with the apocalyptic scenario the media has painted COVID with is almost understandable. The price of oil has crashed and by the time this medical madness runs its course so will most people's budgets for survival in the next twenty years. Strange days have found us and we find ourselves wearing masks in public and going about in a state of paranoid psychosis of all we come in contact with.

This is where this dangerous research in the lab has gone to practical applications in the real world to do harm.

A Love craftian scenario arises that is 'unspeakably' diabolical with the late January arrest of "Dr. Charles Lieber, 60, Chair of the Department of Chemistry and Chemical Biology at Harvard University." Over the course of the last twelve years Lieber has

been the recipient of “\$15,000,000 in grant funding from the National Institutes of Health (NIH) and Department of Defense (DOD).⁽⁶⁾ With the bulk of it coming from the DOD...

A little over nine years ago “Lieber became a “Strategic Scientist” at Wuhan University of Technology (WUT) in China and was a contractual participant in China’s Thousand Talents Plan from in or about 2012 to 2017. China’s Thousand Talents Plan is one of the most prominent Chinese Talent recruit plans that are designed to attract, recruit, and cultivate high-level scientific talent in furtherance of China’s scientific development, economic prosperity and national security.”⁽⁷⁾

“Under the terms of Lieber’s three-year Thousand Talents contract, WUT paid Lieber \$50,000 USD per month, living expenses of up to 1,000,000 Chinese Yuan (approximately \$158,000 USD at the time) and awarded him more than \$1.5 million to establish a research lab at WUT. In return, Lieber was obligated to work for WUT “not less than nine months a year...”⁽⁸⁾

Apparently Lieber neglected to inform the DOD of his torrid and lucrative affair with WUT and subsequently lied about it to them. That is what he has been charged with. The ‘*New York Times*’ covered the incident with an article titled with a poor excuse for a word pun: “*U.S. Accuses Harvard Scientist of Concealing Chinese Funding.*” The January 28 article was written with an audacious spin, now particularly reprehensible in light of the ‘Wuhan Flu,’ that “*scientists will be scrutinized over legitimate sources of international funding.*”⁽⁹⁾

One must wonder about the ‘*New York Times*’. Perhaps their chutzpah in defending him is motivated by the fact that Lieber as a Jew and the winner of the Wolf Prize in Chemistry in 2015 is tied at the hip to Israel, their sponsor. Dr. Charles Lieber is not just any old chairman at Harvard. He very well may be the most brilliant experimental scientist America has ever produced.

Lieber is known for “*making it happen in his laboratory.*” Over twenty years ago he revolutionized nanotechnology by inventing a method using alcohol solutions to manufacture “wires only three nanometers [“A nanometer is one billionth of a meter, or one hundred-thousandth the width of a human hair”] across that can be produced relatively cheaply on a bench top with a few thousand dollars’ worth of equipment”⁽¹⁰⁾

At the beginning of a 2001 Harvard Magazine article lauding Lieber’s achievement, titled **Liquid Computing**, the author asks the reader to “*imagine a computer, suspended in a flask of liquid, which assembles itself when the liquid is poured onto a desktop.*”⁽¹¹⁾

At the time it was estimated, with the methods being used, the wall would be hit for miniaturizing transistors in the middle of the second decade of the twenty-first century. But instead of shaving down larger pieces to make smaller ones as was being done Lieber, essentially using 3-D printing or additive manufacturing, used smaller pieces to assemble what he wanted. This enabled nanotechnology to produce sensors that were

the size of a Virion, and eventually self-contained machines measured in nanometers. The article claimed Lieber had already “produced a transistor just 10 atoms across.”⁽¹²⁾

A decade later Lieber had figured out how, by using nanowires bent at a hundred and twenty degree angle, to insert a Virion sized transistor into a cell without killing it. This he admits had been his objective from the start but the procedure was tricky.

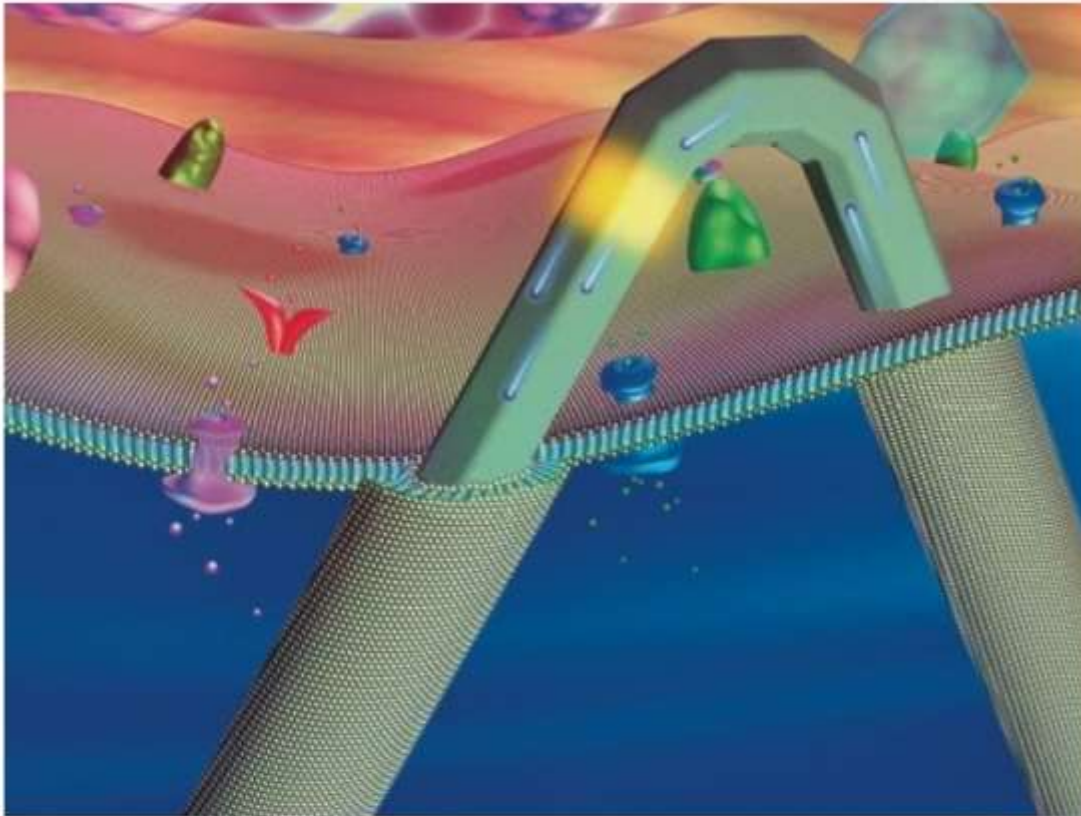
“Merely piercing the cell was not enough, because transistors need a source wire from which electrons flow and a drain wire through which they are discharged.”⁽¹³⁾

In early attempts the damage caused by insertion “killed the cell “pretty quickly.” But when his team coated the hairpin nanowire with a fatty lipid layer (the same substance cell membranes are made of), the device was easily pulled into the cell via membrane fusion, a process related to the one cells use to engulf viruses and bacteria. This innovation is important, Lieber explains, because it indicates that when a man-made structure is as small as a virus or bacteria, it can behave the way biological structures do...”⁽¹⁴⁾

A quick look at Lieber’s web site shows before his arrest he and his monkeys were working on “neural-network-like mesh electronics and a noninvasive delivery method into targeted distinct brain regions via syringe-injection,” essentially a tool to make humans into biological robots. They had already had success injecting it into the brains of mice in 2015. His sponsors include “The Office of Naval Research,” the “Defense Advanced Research Projects Agency [DARPA]” and the “Air Force Office of Scientific Research.”⁽¹⁵⁾

In spite of Lieber being also sponsored by the “National Institute of Health” and his pretensions of being the second coming of Jonas Salk, the bulk of his sponsors are in the business of killing people. They have no interest in medicine or anything else that cannot be weaponized and you can bet the farm that China wasn’t paying him all that money for “powerful new approaches for treatment of neurological and neurodegenerative diseases...”⁽¹⁶⁾

Of course most Americans have never even heard of Dr. Charles Lieber and think Morgan Freeman is America’s greatest living scientist. But other scientists and medical professionals, educated people should find Lieber’s connection to Wuhan more than a bit troubling...



Hyman professor of chemistry Charles Lieber has created a transistor so small it can be used to penetrate cell membranes and probe their interiors, without disrupting function. The transistor (yellow) sits near the bend in a hairpin-shaped, lipid-coated silicon nanowire. Its scale is similar to that of intra-cellular structures such as organelles (pink and blue orbs) and actin filaments (pink strand).

B. Tian and C.M. Lieber, Harvard University <https://harvardmagazine.com/2011/01/virus-sized-transistors>

Citations

- 1 – “60 GHz 5G kill grid hemoglobin molecule water vaccine oxygen epidemic 2.4 patent US 6506148 B2.” Waptek. YouTube, 11 Oct 2018.
Web. https://www.youtube.com/watch?v=NL6L3W-R6ng&app=desktop&fbclid=IwAR2vQgxpTMsoJ8M2aPhQgcqRPwdM-Gd_TThHN5OoZP0odJW5ffdBHES-jvM
- 2 – Imbriano, Joe. “Joe Imbriano presentation [YT CENSORED] 9:44.” YouTube, 27 Feb 2020. Web. https://www.youtube.com/watch?v=7vmF3xtU_r4&app=desktop
- 3 – Shannon, Claude Elwood, 1916-2001. The Mathematical Theory of Communication. Urbana : University of Illinois Press, 1949.
- 4 -“60 GHz oxygen band: precise broadening and central frequencies of fine structured lines, absolute absorption profile at atmospheric pressure, and revision of mixing coefficients (page 14) .” Journal of molecular spectroscopy (January 2005). 60 GHz Frequencies Absorbed by Oxygen February 8, 2020 by Aroy Mak,
Web. <https://blog.iyannis.com/60-ghz-frequencies-absorbed-by-oxygen/>
- 5 – Hakusui, Shigeaki (Shey). “Fixed Wireless Communications at 60GHz Unique Oxygen Absorption Properties.” RF Globalnet. 10 Apr 2001.

Web. <https://www.rfglobalnet.com/doc/fixed-wireless-communications-at-60ghz-unique-0001>

6 – “Harvard University Professor and Two Chinese Nationals Charged in Three Separate China Related Cases.” Department of Justice Office of Public Affairs. 28 Jan 2020. Web. <https://www.justice.gov/opa/pr/harvard-university-professor-and-two-chinese-nationals-charged-three-separate-china-related>

7 – Ibid.

8 – Ibid.

9 – Barry, Ellen. “U.S. Accuses Harvard Scientist of Concealing Chinese Funding.” The New York Times. 28 Jan 2020. Web. <https://www.nytimes.com/2020/01/28/us/charles-lieber-harvard.html>

10 – Shaw, Jonathan. “Liquid Computing.” *Harvard Magazine* . Dec 2001.

Web. <https://harvardmagazine.com/2001/11/liquid-computing.html>

11 – Ibid.

12 – Ibid.

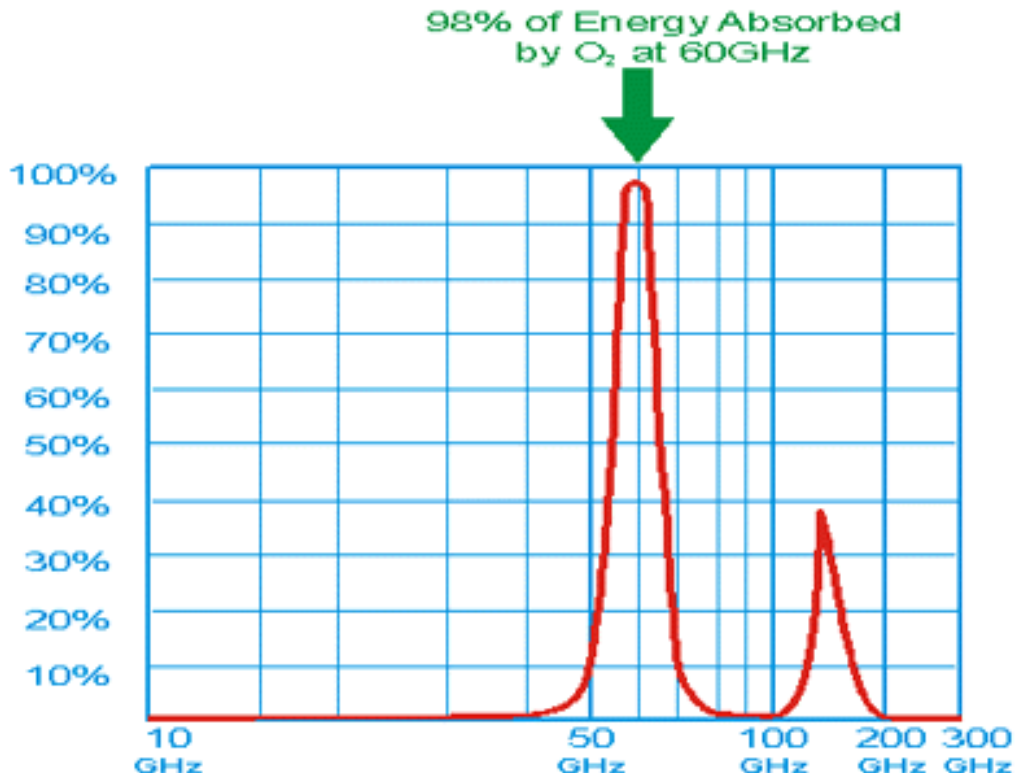
13 – Shaw, Jonathan. “Virus-Sized Transistors.” *Harvard Magazine* . Feb 2011.

Web. <https://harvardmagazine.com/2011/01/virus-sized-transistors>

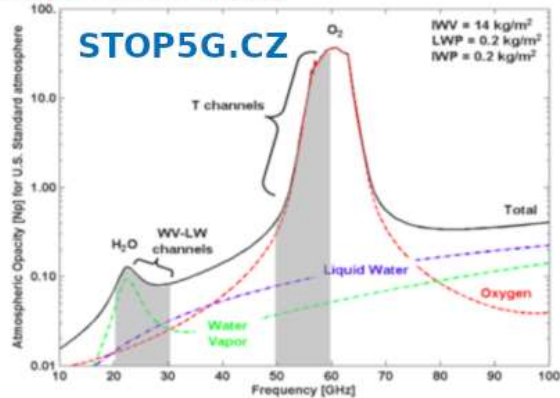
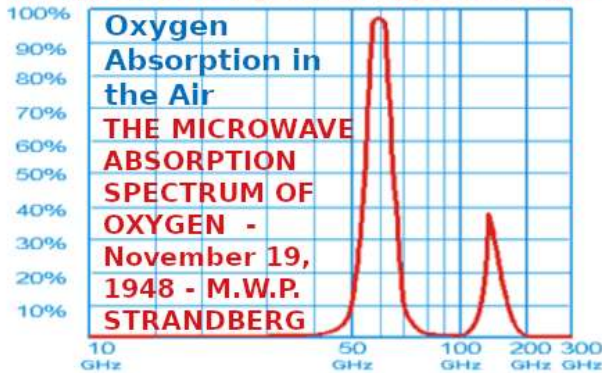
14 – Ibid.

15 – (n.d.). Lieber Research Group. *Overview*. Retrieved from <http://cml.harvard.edu/research/overview>

16 – Ibid.



60 GHz causes electrons surrounding oxygen molecules to spin. The impact of oxygen molecules spinning the electrons is that it makes the hemoglobin unable to uptake the oxygen and get it to the rest of your body. You are unable to breath.



Jack Heart, pen name for George Esposito, is known for his extensive research and writings that provide high-quality information and authentic alternatives to mainstream narratives on a wide variety of subjects. His life experiences make for a highly intriguing perspective.

The previous pages are technical in nature, so much so that if one fully understands and grasps it, they would clearly conclude that Covid-19 is not a virus, it is a complex manifestation of waves and frequencies that impacts the physical body. Keep in mind that we are a biological entity that integrates elements of chemistry and electricity. The untrained mind is unprepared for what the advancements in science has wrought.

Dr. Lee Merritt, a former Navy, U.S. Marine orthopedic surgeon hosts a web site titled Dr. Lee Merritt, The Medical Rebel.com. I have made it a practice to listen to any interview when the name of Dr. Lee Merritt is the guest. At the web page of The Medical Rebel.com, there is an interview with Alex Jones. It is titled “*Dr. Lee Merritt links 5G with Covid.*” I first heard of the revelation of this interview some months back but it did not include the charts below concerning the Ashkenazi Jews (these are not the Biblical Jews or descendants of Abraham, Isaac, and Jacob). Her comments on the fact that Ashkenazi Jews are immune to the Coronavirus or Covid-19 is a stunning fact and speaks to a Biblical lesson on God’s deliverance of a “Remnant”. In previous articles I have addressed the Covid scandemic as a potential way to bring about the end of the blood line descendants of Abraham, Isaac, and Jacob. This topic was first exposed years ago by Dr. Chuck Missler. The Biblical implications are profound as we know the grand plan of Satan in the Bible was to wipe out the Israelites.

The information in Dr. Lee Merritt’s post below is a huge confirmation of which I have suggested to be behind Satan’s plan to exterminate the “remnant” and by so doing eliminated any reason for Jesus Christ to come back and deliver and restore the promises Jesus made to the Jews of His day. Dr. Merritt’s report strengthens my view

that the “plandemic” is really about exterminating the Sephardic Jews, or the descendants of Abraham, Isaac, and Jacob.

While writing this article I came across another article that was posted of an Interview by Dr. Lee Merritt and ZEE Media host. Dr. Merritt presents additional data that becomes critical to what my report is about. Dr. Lee Merritt discusses the DNA harvesting throughout history that has led to the targeted damage of human DNA, the “elite” bloodline that is immune to the bioweapon attack, whether viruses actually exist, the possibility of repairing human DNA and more. Click on the title below to view the full content of Dr. Lee Merritt.

[Targeted DNA Harvesting & Damage, De-Population](#)

Posted: 30 Jun 2022 05:02 AM PDT

Dr. Lee Merritt discusses the DNA harvesting throughout history that has led to the targeted damage of human DNA, the “elite” bloodline that is immune to the bioweapon attack. Dr. Merritt’s commentary becomes a critical part of the larger domain we know as nano-particles and artificial intelligence in cyborgs, half-human and half-AI. Dr. Merritt touches on what we might refer to as science-fiction. This interview provides the viewer with an incredible wealth of information and knowledge to a number of issues that connect in a number of ways.

If I am correct, Covid was a hoax used to fear-monger the world into taking the vaxx. Using the Hegelian Dialectic of “problem-reaction-solution”, Israel became the first nation to be fully vaxxed and also has the highest death rates from Covid-19; and it is among the top five countries that were fully vaxxed and has been identified with the greatest number of deaths and re-infections as well due to Covid-19. What most people will not recognize is that Sephardic Jews are scattered around the world in virtually every nation on the planet. The only way to exterminate the Sephardic Jews would be to create a so-called “Pandemic” and fear-monger the world’s population. The CEO of Pfizer is Albert Bourla who strangely enough says he is a Sephardic Jew. That fact may be a “cover” story to hide his real heritage as an Ashkenazi Jew.

The Sephardic rabbinical Burla family has been near royalty in Palestine since the 1700s. They conspired with the bankers Rothschild, Churchills and the Board of Deputies of British Jews in the mid-1800s to make Israel a British colony masquerading as a Jewish state.

Zionism was a wholly British creation. The Burla rabbis had often written romantically about a re-formed Zion (Eretz Israel), so the British Rothschild’s funded developments of all kinds in Palestine with the proviso that the British were in charge.

The Burla rabbis in Jerusalem did not hide their eagerness to say “yes, yes, yes” to the Churchill-Montefiore (Rothschild) pretext letters starting on [June 14, 1841](#).

For this cooperation, the Rothschild’s commercial interests promised by the Burlas benefit to this very day. If you doubt, just investigate Genie Oil and Gas. If you doubt, just investigate [Genie Oil and Gas](#) that is owned by Jacob Rothschild, Bill

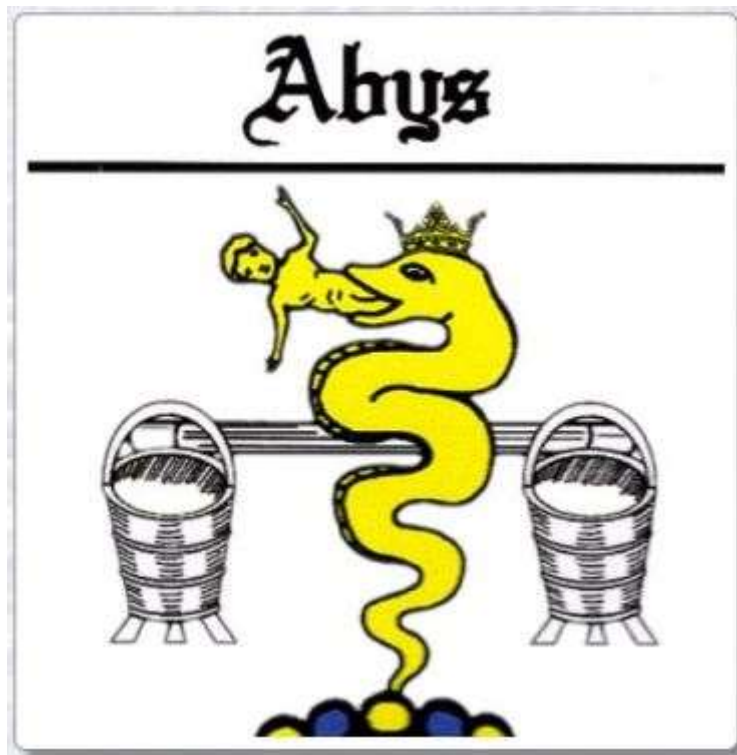
Richardson, Rupert Murdoch, Dick Cheney, Mary Landrieu, Larry Summers, Jim Woolsey (former C.I.A. director).

For the Burla's Rothschild sycophancy the world is paying dearly through the Pfizer pharmacide of their current favorite son, Israel-Abraham Burla (aka Albert Burla).

The Pfizer pharmacide has a parallel set of interlocked relationships to the British, German and Austrian aristocracy. Indeed, Charles Pfizer (1824-1906) was born in the same Baden-Wurtemberg district of Germany as [Klaus Schwab](#) and his Escher Wyss & Co. Nazi collaborator father Eugen Schwab (Ravensburg).

Schwab and Escher Wyss were also allied with British and American nuclear traitors in the OSS (Office of Strategic Services, the precursor to the C.I.A., controlled since inception in [1946 by British MI6](#)). See also the inaugural kickoff meeting [on Mar. 11, 1946](#), six days later.

In Zurich, Switzerland, just 100 miles south of Charles Pfizer's hometown, Anthony Fauci's great great grandfather Raget Abys (1790-1861) was the Secretary of War in the new Swiss republic he helped found, along with founding the ETH (Swiss Federal Institute of Technology) (that Schwab attended), Credit Suisse and Swiss Life.



Fauci's maternal "Abys" family crest is a macabre crowned serpent eating a child and holding two buckets of gold (see above). Indeed, [on Sep. 4, 1618](#), the Abys talc mine in Plurss (now Piuro), Italy collapsed and consumed about 2,500 souls instantly. The Abys family had already moved north to Chur, Switzerland, near Davos

(headquarters of Klaus Schwab's World Economic Forum) when the devastating 9-11-level avalanche was triggered by their negligence. They were selling talc as a lubricant and to be added to medicines, now known to be a carcinogen.

In Israel, the Rothschild's notoriously influence the policy of The Weizmann Institute of Science founded in 1934. Jacob Rothschild currently serves on the international board, as Rothschild's have since inception.

Founder Chaim A. Weizmann served as president of the World Zionist Organization and later as the first president of Israel.

Weizmann's bio-technology research is interlocked with The Wellcome Trust in the UK (i.e., Pirbright Institute, Merial Animal Hospital, Gates Foundation, NIH, DARPA, UKRI), the U.N. WHO, and a plentitude of British scientists serving on Weizmann's board of governors, including Nobel biochemists Sir Ernst Boris Chain and Baron Florey, microbiologist Sir Alexander Fleming.

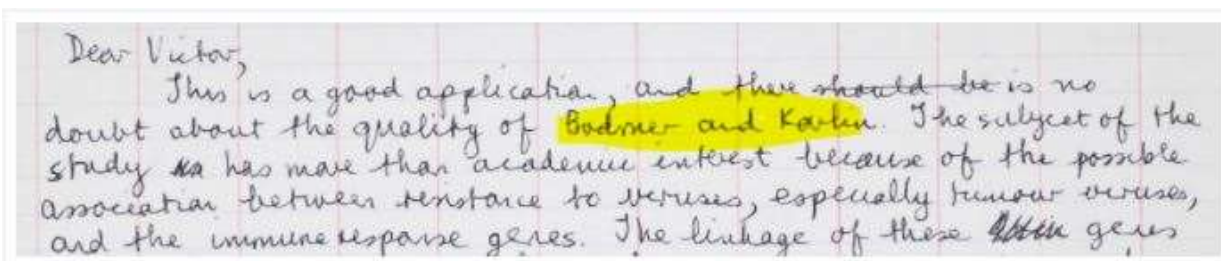
Shockingly, in 1972, Baron Victor Rothschild, who had just presented The Rothschild Report (1971) to the UK Parliament recommending the emergence of a new biotechnology push globally, almost singlehandedly invested in 20% UK and 80% U.S. companies.

He funded Nobel biologist Sydney Brenner to start doing DNA experiments on all of Israel (“due to the peculiar structure of the Jewish population”).

After his Report, Victor Rothschild founded his new biotechnology companies—[Biotechnology Investments Limited \(BIL\) \(UK\)](#) and International Biotechnology Trust (IBT) PLC) (now run by Rothschild Asset Management).

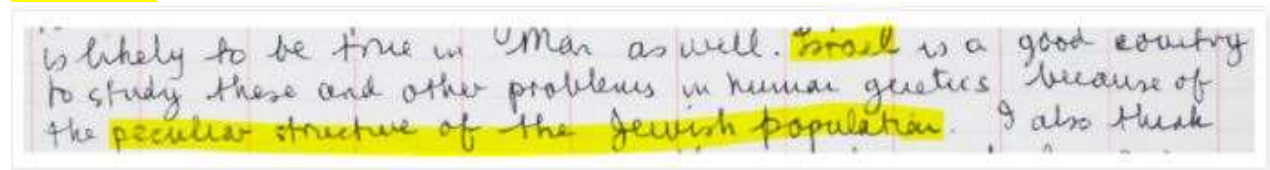
[David Fishlock. \(Sep. 09, 1983\)](#). Blue chip genes promise high returns, re. Lord Victor Rothschild, Biotechnology Investments Limited (BIL), Guernsey Reg. No. 9767, formed Apr. 16, 1981; successor International Biotechnology Trust Plc, UK Co. No. 02892872, formed Jan. 31, 1994, financed by N.M. Rothschild Asset Management, p.6. The Financial Times (UK).

**THE ROTHSCHILD'S “CONFIDENTIAL” PRIORITY — CARRY ON THE NAZI GENE EXPERIMENTS ON JEWS IN ISRAEL
GENETIC EXPERIMENTATION ON ENGLISH OLD FOLKS**



Dear Victor,
This is a good application, and there should be no doubt about the quality of Bodmer and Karlin. The subject of the study has more than academic interest because of the possible association between resistance to viruses, especially tumour viruses, and the immune response genes. The linkage of these ~~the~~ genes

PROPOSAL TO PERFORM GENETIC ENGINEERING EXPERIMENTS ON ISRAELI CITIZENS



VICTOR ROTHSCHILD: A BIOTECHNOLOGY MONSTER

Let's repeat these monstrous facts:

In 1972, Sephardic Jew Baron Victor Rothschild recommended that Nobel chemist/biologist Sydney Brenner (1927-2019) consider conducting "**immune response genes**" experiments on the Jewish Israeli population in addition to English old folks' homes populations.

Confidential.

Lord Rothschild
23 St. James's Place
London etc

Dear Victor,

This is a good application, and there should be no doubt about the quality of Bodmer and Kevlin. The subject of the study has more than academic interest because of the possible association between resistance to viruses, especially human viruses, and the immune response genes. The linkage of these ~~the~~ genes to the histocompatibility locus has been proven in mice and is likely to be true in Man as well. Israel is a good country to study these and other problems in human genetics because of the peculiar structure of the Jewish population. I also think that the collaborative style is worth supporting ~~and also~~ even ~~though~~ though there is an additional ~~travel~~ requirement for travel money. I am however worried about taking on Kevlin for a short time and feel that you ought to have a certain average there ought to be a defined arrangement for ~~these~~ them on grant completion. Similarly no student or post doctoral fellow should be taken on at a time when his expected tenure might overrun the remuneration date.

I hope this is what you want. To

Yours
Sydney

[Chief Scientist
MRC Laboratory of Molecular Biology,
Medical Research Council,
Under Royal Charter,
(1924-29) British Pilgrims Society co-founder Earl Arthur Balfour, Chairman,
(1916-20) American Waldorf Astoria, Chairman; Waldorf Astoria was the site of the first British
Pilgrims Society meeting in New York on Jan. 13, 1903,
United Kingdom Research and Innovation (UKRI), also funds BBSRC, Pirbright Institute,
Cambridge, UK]

FIG. 2—[SYDNEY BRENNER. \(CA. 1972\)](#). CONFIDENTIAL HANDWRITTEN LETTER FROM SYDNEY BRENNER TO VICTOR ROTHSCHILD RE. GENES, VIRUSES, HUMAN VIRUS EXPERIMENTATION IN UK CARE HOMES BODMER AND KEVLIN,

ISRAEL AND JEWISH POPULATIONS., SB/1/1/561, ITEM NO. 64627. CSHL ARCHIVES.

SYDNEY BRENNER'S EMPLOYER AT THE WRITING OF THIS LORD VICTOR ROTHSCHILD LETTER IN 1972:

CHIEF SCIENTIST,

MRC LABORATORY OF MOLECULAR BIOLOGY,

MEDICAL RESEARCH COUNCIL,

UNDER ROYAL CHARTER,

(1924-29) **BRITISH PILGRIMS SOCIETY** CO-FOUNDER **EARL ARTHUR BALFOUR,** CHAIRMAN,

(1916-20) AMERICAN WALDORF ASTORIA, CHAIRMAN; **WALDORF ASTORIA** WAS THE SITE OF THE FIRST BRITISH PILGRIMS SOCIETY MEETING IN NEW YORK ON JAN. 13, 1903,

UNITED KINGDOM RESEARCH AND INNOVATION (**UKRI**), ALSO

FUNDS **BBSRC, PIRBRIGHT INSTITUTE,**

CAMBRIDGE, UK

PFIZER'S BOURLA AND ISRAEL'S NETANHAYU'S "OBSSESSIVE" PRIORITY TO PUSH ISRAELI JEWS INTO THE COVID POISONING FRONT LINE DISCOVERED!

THEIR BRITISH PILGRIMS SOCIETY HANDLERS, INCLUDING LORD JACOB ROTHSCHILD, ORDERED THEM TO.

THE TIMES OF ISRAEL

[TOI Staff. (Mar. 11, 2021). Pfizer CEO [Albert Bourla] hails 'obsessive' Netanyahu for calling 30 times to seal vaccine deal. *The Times of Israel*. Reproduced for educational purposes only. Fair Use relied upon. Source: <https://www.timesofisrael.com/pfizer-ceo-obsessive-netanyahu-called-30-times-in-effort-to-seal-vaccine-deal/>]

Pfizer CEO hails 'obsessive' Netanyahu for calling 30 times to seal vaccine deal

Speaking with Israeli TV, Albert Bourla says kids under 16 likely to soon get okay for vaccines, younger children to be vaccinated by year's end

By TOI STAFF
11 March 2021, 9:48 pm



Pfizer CEO Albert Bourla speaks at a Pfizer manufacturing site, February 19, 2021, in Portage, Michigan. (AP Photo/Evan Vucci)



[TOI Staff. \(Mar. 11, 2021\).](#) Pfizer CEO [Albert Bourla] hails 'obsessive' Netanyahu for calling 30 times to seal vaccine deal. *The Times of Israel*.

Not that we need more proof of this banking-biopharma demon, the current Jacob Rothschild awarded biochemist Jennifer A. Doudna a 2017 Pilgrims Society's Academy of Achievement award.

Doudna is the co-inventor of the DNA manipulation CRISPR gene editing technology. She interlocks with globalists at Harvard, Yale, Ford Foundation, Genentech, Roche Holding AG (Switzerland), Ballie Gifford UK, Vanguard and Blackrock under the direction of Jacob Rothschild and the British Pilgrims.

CRISPR-Cas9 is ten years old this past month of June, 2022. CRISPR is the greatest discovery in genetic technology since DNA was first discovered by Watson & Crick in the 1950s. The cost of gene sequencing once cost millions if not more but with the discovery of CRISPR, the cost is reduced to around \$200. What I found to be both a surprise and a shock was to learn that Jacob Rothschild was connected to this life-changing advancement. When you understand that the House of Rothschild's are Satanists, and work with an agenda to reduce the population as noted on the granite stone pillars of the Georgia Guidestones located northeast of Atlanta, GA.

Israel is one of the top three countries in the world that have been fully vaccinated, in this case with the Pfizer vaccines or "Gene" Therapy. Technically, the so-called vaccines by the four major pharmaceuticals are not vaccines where attenuated particles are injected to create immunity from a virus. The Pfizer, Moderna, J&J, and Astrazeneca vaccines use a spike Protein (PEG) to enter the cell and reproduce whatever it is programmed to do. The world does not know what it is that they are intended to do. Click on the link just below to gain a picture of what we are facing.

[Operation Extermination—the Plan to Decimate the Human Immune System with a Lab-Generated Pathogen' If someone wished to kill a significant portion of the world's population over the next few years, the systems being put in place right now would enable it.](#)

JACOB ROTHSCHILD'S SHINING FAMILY MOMENT IN 2017. HE SUCCESSFULLY FUNDED THE CRISPR GENE EDITING TOOL LONG DREAMED OF BY HIS ANCESTORS



Awards Council member Lord Jacob Rothschild presents the ~~Academy of Achievement's~~ Golden Plate Award to Dr. Jennifer A. Doudna, co-developer of the CRISPR gene editing technology, in a ceremony at Claridge's in London.

FIG. 3—2017 AMERICAN ACADEMY OF ACHIEVEMENT GOLDEN PLATE AWARDS IN LONDON OVERSEEN BY BRITISH PILGRIMS SOCIETY DIRECTOR BARON JACOB ROTHSCHILD PRESENTING DR. JENNIFER A. DOUDNE. ASSOCIATE JUSTICE NEIL GORSUCH ALSO RECEIVED THE AWARD, AS DID

GEN. DAVID PETRAEUS AND FOX NEWS TURNCOAT CHRIS WALLACE, PREDATOR BILL CLINTON, FORMER ISRAELI PRIME MINISTER EHUD BARAK. [LORD JACOB ROTHSCHILD, DR. JENNIFER A. DOUDNE. \(OCT. 17-21, 2017\)](#). 52ND INTERNATIONAL ACHIEVEMENT SUMMIT, CRISP, P. 24. AMERICAN ACADEMY OF ACHIEVEMENT.

We will leave this Swiss-German-Austrian-British-Israeli-American Pfizer interlocks alone for now and return to the pivotal role that Burla's and Rothschild's played in the founding of Israel and big pharma.

Here are the Rothschild's who have paid in to this current Pfizer, AstraZeneca and BioNTech global pharmacide:

1. **Nathan Mayer (N.M.) Rothschild** (1777-1836)
2. **Sir Moses H. Montefiore** (1784-1884)
3. **Lionel de Rothschild** (1808-1879)
4. **Mayer Amschel de Rothschild** (1818-1874)
5. **Hannah de Rothschild** (1851-1890)
6. **Archibald Primrose, 5th Earl of Rosebery** (1847-1929), British Prime Minister
7. **Nathan Mayer (N.M.) Rothschild, 1st Baron Rothschild** (1840-1915); member of Cecil Rhodes' "Society of the Elect" (1890) cooked up by journalist necromancer W.T. Stead; co-founder of the Pilgrims Society (1902)
8. **Walter Rothschild**, 2nd Baron Rothschild (1868-1937); 2nd Baron Rothschild (1868-1937); Pilgrims Society co-organizer of the 1st Imperial Press Conference, 1909 (Shepherd's Bush, London); pretext recipient of "The Balfour Declaration" cementing British Zionism; collaborator with Burroughs Wellcome & Co., Sir Henry Wellcome and vaccine and chemical warfare; Wellcome himself being the financial underwriter of the Conference
9. **Victor Rothschild**, 3rd Baron Rothschild (1920-1990)
10. **Jacob Rothschild**, 4th Baron Rothschild (1936-present)

Indeed, Mishkenot Sha'ananim, the first Jewish settlement built outside the walls of the Old City of Jerusalem (1860), was bankrolled by Sir Moses Montefiore (1784-1885) whose Jerusalem collaborator was Rabbi Yosef Nissim Burla.

Montefiore, also a Sephardic Jew like Rothschild, was sometimes called Rothschild's "sidekick."

His wife Judith Cohen (1784-1862)'s sister, Hannah (1783-1850), was N.M. Rothschild's wife, thus making Montefiore Rothschild's brother-in-law.

Montefiore was Rothschild's licensed broker on the London Stock Exchange (from 1804). They were partners in the Imperial Continental Gas Association and what is now Sun Alliance insurance.

Montefiore was the Rothschild representative in France who sent back the courier pigeon message that Napoleon had lost at Waterloo. The resulting stock speculation profit cemented N.M. Rothschild's and Montefiore's fortunes.

In 1814, Montefiore had brokered the Rothschild loan to the British government that funded the war against Napoleon.

Montefiore also brokered the Rothschild funding of the [War of 1812](#) against America. They pocketed \$440 million in profit on that one loan that burned down the White House.

NOTORIOUS ROTHSCHILD SLAVER, OFFSHORE BANKING TRAFFICKER

[In 1835](#), Montefiore invested his own money and helped Rothschild and the British government fund the compensation of British slavers that created the uber corrupt [British offshore banking system in 1838](#) that so plagues world economies to this day.

PFIZER CEO ALBERT BOURLA'S "NOVEL" ABOUT HIS GREEKISH FAMILY

A REQUISITE, UNCORROBORATED AUSCHWITZ STORY

Last year, **Pfizer CEO Albert Bourla** laid down a propaganda smoke screen about his family in the Sephardic Jewish press as well as [Atlantic Council](#) (*Pilgrims Society*), [The Times of Israel](#), [Museum of Jewish Heritage](#) and [LinkedIn](#).

He also wrapped himself in Holocaust sympathy through various exquisitely crafted speeches at Holocaust memorials that some called a "novel." Despite that, he shared nothing about their life at Auschwitz.

Albert's real name is "**Israel-Abraham Burla**" – he has never disclosed that. He changed his name as late as 2001 when he emigrated to America from Greece, according to the *Times of Israel*.

After being silent about his parents his entire life, last year he started trumpeting certain pieces of information last year that were clues to his real identity and political handlers.

"BURLA" IS HIS FAMILY NAME; "BOURLA" IS A DERIVATION

His parents were **Mois and Sara Burla**. He said most of his family perished in Auschwitz after the roundup of 50,000 Sephardic Jews in Thessaloniki, Greece.

INTERNATIONAL RED CROSS WAS A BRITISH ZIONIST PILGRIMS SOCIETY FRONT

He said his father Mois and uncle Abraham escaped the roundup and took refuge in Athens, bribed the local police chief for fake Christian names Manolis and Vasilis respectively, and avoided capture by working fulltime for the International Red Cross in Athens for the rest of the Axis occupation.

Tellingly, Bourla was silent on what Mois and Abraham did or how they escaped detection. Wikipedia goes out of its way to tell us that the food import facility they worked in was never bombed during the war. This is reminiscent of a similar “fact” floated about what Klaus Schwab’s Escher Wyss nuclear turbine manufacturing facility escaped Allied bombs ostensibly due to International Red Cross intervention during the war.

JOINT RELIEF COMMISSION (JRC) EMERGED IN GREECE TO PRESS BRITISH ZIONISM. FOOD RELIEF WAS A SMOKE SCREEN

What is notoriously known about the International Red Cross in Athens from 1942-44 was that a subsidiary food import operation, the Joint Relief Commission (JRC), emerged as a “state within a state” and was controlled by the Red Cross, Chamber of Commerce and British Pilgrims Society.

Given the stature of the Burla family in Jerusalem—essentially rabbinical royalty—and given the British Zionist plans for Palestine whose founders include the Burla rabbinical family—it is reasonable to assume that Mois and Abraham Burla were couriers between the Athens and Zurich International Red Cross and Jerusalem’s Burla family leaders.

SCHWAB AND FAUCI (ABYS) BLOODLINE FINGERPRINTS

During this period, Martin Bodmar was vice-president of the International Red Cross (1940-71). Bodmar helped coordinate the International Chamber of Commerce that the Rockefeller family member Winthrop W. Aldrich was preparing to lead at the end of the war.

Aldrich was also CEO of Chase Bank and key organizer of the Marshall Plan and its support for the British Zionist partition of Palestine, as well as establishing the Bank for International Settlements in Basel, Switzerland. J.P. Morgan and Chase Bank were notoriously known to be underwritten by the Rothschild cartel.

WORLD ECONOMIC FORUM

Notably, Klaus Schwab, the founder of the World Economic Forum (WEF, 1971), lived at Bodmar castle while attending grade school in the Au suburb of Zurich.

Earlier, in 1917, Vladimir Lenin lived near ETH and the Escher Wyss manufacturing campus in Zurich after spending a decade being trained in Bolshevism-communism by the Pilgrims Society in London, just before being sent to Leningrad to overthrow Christian Czar Nicholas II, then slaughtering the Czar’s entire family and some servants on Jul. 19, 1918.

ESCHER WYSS & CO.

Bodmar had purchased this land from Fanny Moser-(Sulzer AG). Sulzer AG is the current name of Klaus Schwab’s Nazi-collaborating nuclear company Escher-Wyss & Co. The Bodmar family property in Cologny, Geneva Canton, Switzerland is the current site of the WEF where Schwab resides today.

ETH (SWISS FEDERAL INSTITUTES OF TECHNOLOGY)

In 1854, Raget Abys, Antony Fauci's maternal great great grandfather, founded ETH (Swiss Federal Institutes of Technology) in Zurich.

BRUNNER MOND & CO.

English Chemist [Henry Brunner](#) (1838-1916) graduated from ETH at this same time soon after Abys founded it.

After leaving ETH, Brunner founded Brunner Mond and Company starting as a borax manufacturer as well as the key components of gunpowder where he quickly became the sole supplier of gunpowder to the British Army.

BRITISH PILGRIMS SOCIETY FIRST IMPERIAL PRESS CONFERENCE, 1909

The Empire Press Union, Reuters, Associated Press global British news monopoly was set up in 1909. These same newspapermen established British war propaganda and also formed MI6, MI5 and GC&CS now GCHQ.

ICI, ASTRAZENECA, BOWARFARE

Mond purchased AkzoNobel to create Imperial Chemical Industries (ICI) that split in 1999 to create AstraZeneca PLC (UK), another bioweapons manufacturer plaguing humanity right now.

ISRAEL-ABRAHAM BURLA

Albert's real name is "**Israel-Abraham Burla**" – he has never disclosed that. He changed his name as late as 2001 when he emigrated to America from Greece, according to the *Times of Israel*.

After being silent about his parents his entire life, he started trumpeting certain pieces of information last year that were clues to his real identity and political handlers.

"BURLA" IS HIS FAMILY NAME; "BOURLA" IS A DERIVATION

His parents were Mois and Sara Burla. He said most of his family perished in Auschwitz after the deportation of 50,000 Jews in Thessaloniki, Greece.

He said his father Mois and uncle Abraham escaped the roundup and took refuge in Athens, bribed the local police chief for the fake Christian names "Manolis" and "Vasilis" respectively, and avoided capture the rest of the occupation.

Albert is tellingly silent about his father Mois Burla's stature in Palestine and their interlocks with the Rothschild's and British Zionists.

BURLA FAMILY IS RABBINICAL ROYALTY IN PALESTINE-ISRAEL

A seminal backdrop to this story is that the [Burla family](#) may be as close to Jewish royalty as one can get in then Palestine / Israel.

Rabbi Israel Burla (d. 1798) was one of Jerusalem's leading scholars in that time.

Rabbi Yosef Nissim Burla (1828-1903) and Rabbi Yehuda Burla (1886-1969) were leaders of the Sephardic Jews in Jerusalem and close Zionist collaborators with Lords Rothschild, Sir Moses Montefiore, Deputies of the British Jews, Col. Charles Henry Churchill and the British government to revive a Jewish homeland controlled by the British—a British colony of Anglophile secular Jews.

Hayyim Jacob Burla (ca. 1847-1929), emissary to North Africa, Tripoli, Morocco; preacher.

Jacob Hai Ben Judah Burla (d. 1892). Jerusalem cantor, founded Hemed Bahurim Society for evening and Sabbath study.

DEMONS CONTROL THE BRITISH

Wikipedia very evidently attempts to obscure (“not to be confused with”) the relationship of [Col. Charles Henry Churchill](#) to our 20th century British Pilgrims Society co-founder, prime minister Winston Churchill. Genealogist don’t write like that. They are plain speaking and just say what they know. This entry was evidently meant to throw the dogs off the hunt.

The AFI hounds persisted in their unearthing history of British Zionism..

ROYAL CHURCHILL BASTARD AT THE OUTSET OF THE HANOVERIAN GERMAN TAKEOVER OF ENGLAND, SCOTLAND, WALES AND IRELAND

LINEAGE TIED TO THE INITIATION OF BRITISH ZIONISM (JUN. 14, 1841) BY A CHURCHILL PRETEXT

The facts strongly point to Col. Charles Henry Churchill as the great grandson and illegitimate royal child of a promiscuous King George II (the first German Hanover monarch, 1683-1760) and equally promiscuous and notoriously beautiful actress [Ann Oldfield](#) (also “Anne” and “Nance”).

Ann Oldfield (1683-1730), notoriously beautiful and likely paramour to King George II (1683-1760), the first German Hanoverian king (not English) and mother (“baby mommy”) of General Charles Churchill (1720-1812), likely raised and renamed by the Kings’ loyal Groom of the Bedchamber, Lt. Gen. Charles Churchill (1679-1745), brother of John Churchill, 1st Duke of Marlborough (1650-1722).

See [Ann Oldfield memorial at Westminster Abbey](#).

This conclusion is reinforced by the fact that Ann is buried in Westminster Abbey—an honor normally limited to heads of state and notables like scientist Sir Issac Newton and Diana Princess of Wales.

King George II’s “Groom of the Bedchamber” (from 1727-42) was Lt. Gen. Charles Churchill (1679-1745)—Ann’s ostensible baby daddy.

However, Lt. Gen. Churchill would most assuredly never have had the influence to order Ann to be interred in Westminster Abbey.

It appears that Lt. Gen. Charles Churchill, King George II's Groom of the Bedchamber, became the secret guardian and namesake to for King George II's bastard child: Col. Charles Churchill.

Indeed, history and modern Churchill propaganda may want to hide the potentially illegitimacy of our lionized modern Winston Churchill.

The illegitimate "Col. Charles Churchill " married an equally illegitimate Lady Maria Walpole. (Such a marriage of two illegitimate children would not normally be recognized in British society. *But this one was.* It had to have been because of Churchill's royal bastard blood.

Maria Walpole was the daughter of Robert Walpole (1676-1745), the longest serving prime minister in Britain (1721-42) and the politician who supported the Hanoverian George II's claims to the British Crown over the Scot Stuart Jacobites.

BRITISH ZIONISM WAS A DEMONIC PRETEXT FOR BRITISH RULE OF PALESTINE... *THE JEWISH DIASPORA WAS NEVER THEIR CONCERN—THEY ONLY PRETENDED TO CARE*

We conclude that the origins of Zionism, as evidenced by Col. Charles Henry Churchill's [Jun. 4, 1841](#) pretext letter to Sir Moses Montefiore and the Deputies of the British Jews, is rooted in demonic ancestral Churchill family activity to dominate humanity at all cost through lies, deceit, treachery, debauchery and adultery.

Indeed, our modern Winston Churchill was a co-founder of the British Pilgrims Society (1902) and a hovering delegate at the First Imperial Press Conference, 1909 where imperial British corporatism took flight. Their destination: A NEW (BRITISH) WORLD ORDER WITH AMERICA IN TOW... and Israel cleared of religious Christian and Jewish blood?

[Lucien Wolf. \(1919\)](#). Col. Charles Henry Churchill to Sir Moses Montefiore [Rothschild BR-L, partner], Jun. 14, 1841 et al, pp. 119-25, Notes on the Diplomatic History of the Jewish Question, Jewish Historical Society of England, University College, London.

See also [Bonnie Goodman. \(Jun. 26, 2018\)](#). Colonel Charles Henry Churchill's letter to Sir Moses Montefiore, a first in supporting a Jewish state in Palestine. *The Jerusalem Post*.

Since before the 17th century, these British demons have been working to enslave all of humanity.

LT. GEN. CHARLES CHURCHILL'S (1679-1745) GRANDFATHER WAS SIR WINSTON CHURCHILL (1620-1688)

Indeed, the Churchill demons, tied to the Burlas and the demons of British Zionism, become evident in these facts.

Sir Moses H. Montefiore was an early follower of John Ruskin's (1819-1900) socialist-communist vision called the "settlement movement" that was later embraced by British Privy Councilor warmongers Alfred Milner, Lord Pirbright, Lord Rosebery, Lords Rothschild, Cecil Rhodes, Salvation Army, YMCA, John Buchan, Vladimir Lenin, Joseph Stalin and Mao Tse-tung. The Jerusalem settlement was perhaps the first incarnation of communist principles of a two-tiered society of leaders (have autocrats) and their followers (have not slaves).

Zionist rabbis supported socialism-communism as political controls over the Rothschild funds distributed from London. **Our modern WWII prime minister Winston Churchill's heavily propagandized family history now starts to read more like demon spawn too.**

His grandmother Consuelo Vanderbilt (1877-1964) entwined the Churchill's inextricably to the Rothschild debt slavery scheme where Cornelius Vanderbilt and Rothschild agent J.P. Morgan (later British Pilgrims Society founder, 1902) used the Y.M.C.A. New York (founded 1851) to recruit young men for their industries, use adultery, rape and sodomy to compromise the men and Christian pastors to forge lifelong debt slaves. His maternal grandfather, anglophile Leonard Jerome, was a stock speculator known as "The King of Wall Street." Jerome's daughter became Lady Randolph Churchill who married Lord Randolph Churchill (1849-1895), Winston's father and mother—the male Churchill line all being the bastard lineage of King George II (1683-1760), according to this research.

Notably, our modern Winston Churchill was a co-founder of the British Pilgrims Society (1902, [1909](#)) and modern press propaganda.

Also notably, the current prime minister Boris Johnson is the great great grandson of Sir George Williams, the founder of the Y.M.C.A., a precursor to the settlement movement and communism. His newly-minted wife Carrie is the illegitimate granddaughter former prime minister Herbert H. Asquith, who is a Pilgrims Society co-founder, founder of the British intelligence agency that dominate America: MI6, MI5 and GC&CS now GCHQ, and WWI warmonger demon.

A more obvious demon soup one cannot imagine.

BURLA'S SEPHARDIC JEWISH FAMILY IS A LONG TIME ROTHSCHILD BENEFICIARY

Two Rothschild's figure prominently in the Burla history. Bankers Nathan Mayer (N.M.) Rothschild (and his sons) and Sir Moses Montefiore. Montefiore is N.M. Rothschild's brother-in-law as well as grandfather to various Rothschild's that his daughters married.

THE UNHOLY ZIONIST ALLIANCE WITH IMPERIAL BRITISH CORPORATISM

Inevitably, Burla rabbis began taking donations from their Sephardic Jewish cousins in London—the Rothschild's. More specifically Sir Moses Montefiore—N.M. Rothschild's brother-in-law and stockbroker on the London Exchange, sometimes called his banking "[sidekick](#)."

[Montefiore](#) was one of the original members of the London Stock Exchange (1806). At that time there were only 12 licensed Jewish brokers in London. He was one of them.

ROTHSCHILD, MONTEFIORE PAID OFF THE BRITISH SLAVE OWNERS

[Montefiore partnered with N.M. Rothschild and Parliament](#) to fund the compensation of slave owners in 1836, followed by the formation of the white, black, brown, yellow and red, debt slavery model of the British offshore banking system that oppresses the world today.

Montefiore funded [Mishkenot Sha'ananim](#), the first Jewish settlement outside of Jerusalem.

BOURLA'S AUSCHWITZ STORY

According to Bourla's freshly-minted narrative, half his Sephardic Jewish family in Thessaloniki, Greece perished in Auschwitz and the other half, including his father and uncle, were successfully hidden and employed for years by the Red Cross in Athens.

His father, Mois, and uncle, Abraham, worked for the International Red Cross in Athens throughout the war. Tellingly, Bourla was silent on what Mois and Abraham did or how they escaped detection.

What is notoriously known about the International Red Cross in Athens from 1942-44 was that a subsidiary food import organization was a "state within a state."

Given the stature of the Burla family in Jerusalem, and given the British Zionist plans for Palestine, it is reasonable to assume that Mois and Abraham were Red Cross couriers between the Athens and Zurich International Red Cross and Jerusalem's Burla leaders.

THE SWISS, BODMAR, ROCKEFELLER, RED CROSS, CHAMBER OF COMMERCE INTERLOCKS

During this period, [Martin Bodmar](#) was vice-president of the International Red Cross (1940-71).

Bodmar helped coordinate the International Chamber of Commerce that the Rockefeller family member Winthrop W. Aldrich was preparing to lead in his dual role of CEO of Chase Bank and chief influencer of the emerging Marshall Plan.

Part of that plan was the British Pilgrims Society Zionist's partition of Palestine. Notably, Klaus Schwab, the founder of the World Economic Forum (1971), lived at Bodmar castle while attending grade school in the AU suburb of Zurich. Bodmar had purchased this land from Fanny Moser-(Sulzer AG). Sulzer AG is the current name of Klaus Schwab's Nazi-collaborating nuclear company Escher-Wyss & Co.

The Bodmar family property in Cologny, Geneva Canton, Switzerland is the current site of the WEF where Schwab also resides.

In 1854, [Ragel Abys, Antony Fauci's maternal great great grandfather](#), founded ETH (Swiss Federal Institutes of Technology) in Zurich as Switzerland's first secretary of war. English Chemist [Henry Brunner](#) (1838-1916) graduated from ETH at this same time. Brunner's father John was a Swiss school master.

After leaving ETH, Brunner founded Brunner Mond and Company starting as a borax manufacturer as well as the key components of gunpowder where he quickly became the sole supplier of gunpowder to the British Army.

A co-founder of the British Pilgrims Society (1902) was **Sir Alfred Mond**. Mond also oversaw the organization of the [First Imperial Press Conference, 1909](#) when British war propaganda took flight along with the formation of MI6, MI5 and GC&CS now GCHQ. Mond was president of Brunner Mond chemicals, later Imperial Chemical Industries (ICI) and AstraZeneca. He also did substantial business in Israel.



FIG. 4—L/R: SIR ALFRED MOND, ZIONIST, PRESIDENT, BRUNNER MOND (LATER ICI, ASTRAZENECA); PRIME MINISTER **DAVID LLOYD GEORGE**, CA. 1914. CO-FOUNDERS OF THE BRITISH PILGRIMS SOCIETY AND CO-CONVENERS OF THE [FIRST IMPERIAL PRESS CONFERENCE, 1909](#).

CONCLUSION

Albert Bourla, originally Israel-Abraham Burla is a British Pilgrims Zionist fraud who was placed at the top of Pfizer, Inc. to press bio-warfare on the world public and his own Sephardic Jewish people in Israel.

Why? Because the demon that possesses him hates humankind.

We demand that this Burla / Pfizer demon *name himself*, in public.

Moving on we link what Dr. Lee Merritt spoke about in her recent podcasts.

COVID 'VACCINE' GENOCIDE: The Smoking Gun

Posted on [June 26, 2022](#) by [State of the Nation](#)

How convenient: **“the Ashkenazi Jewish bloodline is practically immune to the spike protein”**

SOTN Editor's Note: The following exposé presents what is perhaps the most important scientific data/info which proves not only that the Covid vaccines were deliberately weaponized to carry out a systematic depopulation of the planet, but also who's really behind it. Where is concerns the entirety of **OPERATION COVID-19**, the 64-thousand dollar question has always been: **“Qui bono?”**. What follows is the conclusive answer to that crucial inquiry.

Dr. Lee Merritt, an authentic expert

Dr. Lee Merritt – Targeted DNA Harvesting & Damage, De-Population, Globalists IMMUNE, Repairing DNA

By Jack Heart, Veterans Today

[Dr. Lee Merritt – Targeted DNA Harvesting & Damage, De-Population, Globalists IMMUNE, Repairing DNA](#) –JUN 20, 2022


Dr. Merritt was a Marine Corps surgeon for ten years and is married to a senior officer at the Pentagon. She served over four years as supervising physician for the Navy Research Advisory Committee and is a past president of the Association of American Physicians and Surgeons. Dr. Merritt has been monitoring the COVID situation, on the advice of a colleague from Fort Detrick, since Christmas of 2019 before most physicians knew there was any such thing as COVID. She is the ultimate beltway insider and only a mainstream media zombie would ignore what she has to say here.

In the first ten minutes or so Dr. Merritt points out that, regardless of whether there is any such thing as a virus or not, it is the spiked protein that is making people sick. Early on in what was until then unprecedented, scholarly papers were withdrawn from medical publications proving that the spiked protein had been derived from HIV leaving no doubt that it was genetically engineered. When alternative news sites like ZeroHedge picked up on the fact that the spiked protein is a bioweapon they were simply de-platformed and thus began the complete betrayal of all human life on earth by a media that in the last two years has become the very embodiment of evil...

Dr. Merritt goes on to say this **“toxic nano particle,”** it's a synthetic pathogen, is not airborne. That's the big lie. It was spread manually in Wuhan, parts of Lombardy and in New York City. Then a massive worldwide campaign was launched, through a rigorously censored media and politicians, either bought and paid for or incompetent or both, to spread not a virus but the fear of a virus. This demonic charade was presided over and directed by mad scientist extraordinaire Dr. Anthony Fauci, who vacillated between telling people they did not need a mask to they should wear one to bed and two when they go out.

Predictably the majority of people, already scared to death, without doing the due diligence they would do before they bought a car, ran out and got themselves injected with a “*unknown unproven genetic agent*” containing DNA coding instructions to produce the spiked protein in their own body. **The vaccine is the real bioweapon and everything else has been disinformation to cover up the damage the vaccine is doing.** The PCR test doesn't work and never has worked, leaving the existence of this so said virus highly questionable. **You cannot have a variant of a virus that does not exist.**

“ELIMINATE THE SOUL WITH MEDICINE”



theorganizeearth More than a hundred years ago, Rudolf Steiner wrote the following:

“In the future, we will eliminate the soul with medicine. Under the pretext of a 'healthy point of view', there will be a vaccine by which the human body will be treated as soon as possible directly at birth, so that the human being cannot develop the thought of the existence of soul and Spirit.

To materialistic doctors, will be entrusted the task of removing the soul of humanity. As today, people are vaccinated against this disease or that disease, so in the future, children will be vaccinated with a substance that can be produced precisely in such a way that people, thanks to this vaccination, will be immune to being subjected to the "madness" of spiritual life.

He would be extremely smart, but he would not develop a conscience, and that is the true goal of some materialistic circles.

With such a vaccine, you can easily make the etheric body loose in the physical body.

Once the etheric body is detached, the relationship between the universe and the etheric body would become extremely unstable, and man would become an automaton, for the physical body of man must be polished on this Earth by spiritual will.

So, the vaccine becomes a kind of arymanique force; man can no longer get rid of a given materialistic feeling. He becomes materialistic of constitution and can no longer rise to the spiritual.”

-Rudolf Steiner (1861-1925)

It is scientists themselves, through their manipulation of the particles to get them under the electron microscope, a two-week process that is causing their mutation into what are being called viruses. **Dr. Merritt further points out that all they are seeing in their electron microscopes are tiny specks. The pictures of the virus particle festooned all**

over the media are nothing but artists' renditions. They have little to no idea what these tiny particles really look like. They are nano particles.

Since its appropriation by Europeans, Australia has periodically undergone explosions in its mice population that have wreaked havoc on agriculture. By 2016 a sterilizing vaccine had been developed. The vaccine is administered to female mice ruining their ovaries for reproduction and then the females are released into the indigenous mice population. The vaccine then “*self disseminates*” by the process of shedding, where it's passed from one mouse to another merely by contact.

To avoid extinction of the species the vaccine wears out by the third generation. I guess we will have to wait and see if that kind of empathy has been extended to the human race but clearly, they do not need to vaccinate everybody to infect everybody. **[[Dr. Barry Trower sees it differently. He stated in a video that the eggs of a girl may not be viable after three generations. Otherwise a mother today who has her daughter vaxxed will not produce viable eggs to bear children with the third generation, or granddaughters. –(Pastor Bob)]]**

About thirty minutes in Dr. Merritt cuts to the chase. Such a plan if surreptitiously carried out by an elite group would be suicidal, that is if they were not certain they had hereditary immunity to the spiked protein. The Americans have been caught harvesting genetic samples in China and in 2017 in Russia. With the advent of the Human Genome Project, it became feasible to modify the spiked protein to electrostatically adhere to particular genetic sequences.

Prior infectious pathogens never got past the respiratory system but “*this stuff actually hooks in, this bioweapon they made from genetic material, actually hooks into your ACE2 pathway [ACE2 pathways regulate thermogenesis and energy metabolism within the body] and we've got ACE2 pathways all over the body. But depending on your genetics is the strength in which it hooks in.*”

Dr. Merritt, no doubt wanting to maintain political correctness, if not for her own sake for the Pentagon's, then dances around the fact that the Ashkenazi bloodline is practically immune to the spiked protein. This is an abstract [see chart on next two pages] from a scientific paper published in the summer of 2020, telling you exactly what your chances of being killed or maimed by the spiked protein are according to your race:

“*The susceptibility of different populations to SARS-CoV-2 infection is not yet understood. Here, we combined ACE2 coding variants' analysis in different populations and computational chemistry calculations to probe the effects on SARS-CoV-2/ACE2 interaction. ACE2-K26R; which is most frequent in Ashkenazi Jewish population decreased the SARS-CoV-2/ACE2 electrostatic attraction. On the contrary, ACE2-I468V, R219C, K341R, D206G, G211R increased the electrostatic attraction; ordered by binding strength from weakest to strongest. The aforementioned variants are most frequent in East Asian, South Asian, African and African American, European, European and South Asian populations, respectively.*” (1)

Editor comments: The importance of the statement above about “ACE2-K26R; which is most frequent in Ashkenazi Jewish population decreased the SARS-CoV-2/ACE2 electrostatic attraction”

becomes a significant factor in what is revealed further in this article about the relationship between Pfizer CEO Albert Bourla and the Rothschild’s. I have included in this article a great deal of information about the connection between them and their program that resulted in the state of Israel being the first most vaccinated country before the rest of the world. Israeli citizens, particularly so the Orthodox sect were forced to be vaxxed against religious beliefs.

Israel keeps secret its death rate and reports leaking out indicate that they also had the highest rate of those boosted with third and fourth shots. Dr. Zev Zelenko two years ago gave a presentation to the leading rabbis about not administering the “death” shots. Dr. Zelenko is an upstate New York physician who has treated over 4,000 patients for Covid without a single fatality among his patients.

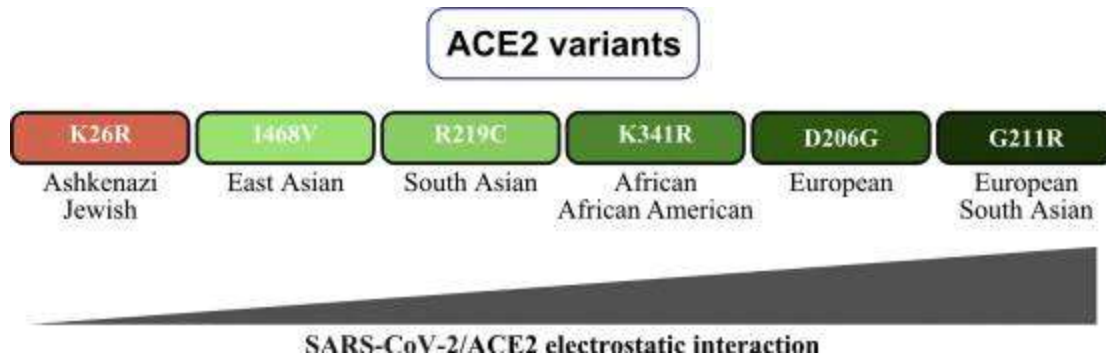
Dr. Zelenko died a few days ago from 4th stage cancer, and two years ago he offered his treatment therapy called Zstack on line at his web site. His therapy is available at [tack Official Website | Zstack Coupon Code 5% DISCOUNT](https://healthdietbeautycbdproducts.com/vladimirzelenko/official)
<https://healthdietbeautycbdproducts.com/vladimirzelenko/official>

When he was unable to handle the volume of orders for his Zstack in 2021, he posted the ingredients in his protocol formula so that people could buy over the counter from local pharmacies to protect themselves from this bioweapon. Below is a still frame shot of the Supplement Facts found on Dr. Zelenko’s Zstack.

S U P P L E M E N T F A C T S		
Serving Size 2 Capsules	Serving Per Container 30	
	Amount Per Serving	%Daily Value
Vitamin C (as Ascorbic Acid)	800 mg	889%
Vitamin D3 (as Cholecalciferol)(5,000IU)	125 mcg	625%
Zinc (from 130mg Zinc Sulfate)	30 mg	273%
Quercetin 95%	500 mg	†

† Daily Value not established.

Other Ingredients: Hypromellose Capsule (Vegetable Capsule).



Dr. Merritt spends most of the rest of the hour discussing the fraudulent claims about, and weaponization in Africa, of what is being called hemorrhagic fever. This was covered extensively by us in our 2016-piece, [Blood of Christ: Paint It Blue Hemorrhagic Fever, Expendable Humans and Bacteria Gone BeZerk](#). At almost fifty-seven minutes in she again cuts to the chase when she brings up the “nano mafia” and explains how much easier and more efficient it would be using nano technology to convert human beings into obedient robot slaves.

She points out that Merck contrary to what they were saying in public about getting out of the vaccine business in 2014 were taking it to the next level with their purchase of the cutting-edge company for neuro-brain interface technology as developed by the disgraced Dr. Charles Lieber. The epiphany in all of this will become apparent with the last three paragraphs of this essay and a careful reading of our Bormann Faction pieces.

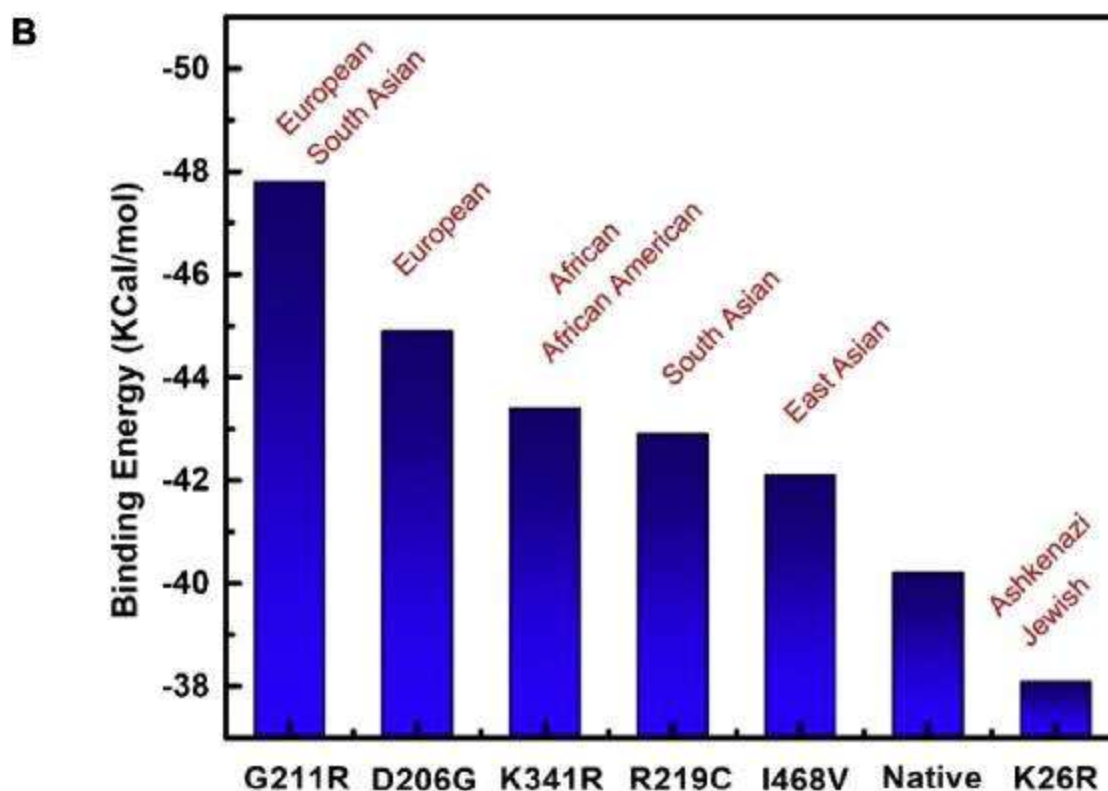
I had my own epiphany when at an hour and three and half minutes in she explains the reason why anti-parasitical drugs like hydroxychloroquine and ivermectin are anathema to the witch doctors and the dancing devils on the evening news. Anti-parasitical drugs are nano-inhibitors. I had read this in a scientific paper about nano particles in the human body in early 2020 when Phil Hunter and I wrote [5 G causes COVID and other reasons to turn off the Internet](#).

At the time the media was lampooning doctors who were recommending the use of hydroxychloroquine even as Trump was touting it. When I had went back to the same paper to show Phil the sentence specifically naming hydroxychloroquine as a nano-inhibitor the sentence had been purged from the paper. I do this for a living, I’m a professional, I knew what I read but I had no proof, so I was forced to forget about it, until now. Maybe there is hope for those who have allowed themselves to be injected with this transhuman poison...

A

The interaction energies between SARS-CoV-2 and ACE2				
	Electrostatics (Kcal/mol)	vdW (Kcal/mol)	Total (Kcal/mol)	Population
G211R	-12.4	-35.4	-47.8	European South Asian
D206G	-8.8	-36.1	-44.9	European
K341R	-14.2	-29.3	-43.4	African/African American
R219C	-4.6	-38.3	-42.9	South Asian
I468V	-4.7	-37.4	-42.1	East Asian
Native	-9.6	-30.1	-40.2	
K26R	-3.7	-34.4	-38.1	Ashkenazi Jewish

The entries are sorted from lowest to the highest interaction energies



Citation

1 – Ali, Fedaa, Menattallah Elserafy, Mohamed H. Alkordi and Muhamed Amin. “ACE2 coding variants in different populations and their potential impact on SARS-CoV-2 binding affinity.” *National Library of Medicine*. PubMed, 20 Aug 2020. Web. <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7439997/>>. <https://www.veteranstoday.com/2022/06/25/dr-lee-merritt-an-authentic-expert/>

Anyone that is denying the link between this allegedly deadly “virus” and the symptoms associated with radiation sickness should not be trusted.

The evidence is POURING in that people are, indeed, getting sick from wireless radiation.

THE PROBLEM IS NOT JUST 5G.

ALL TYPES OF MANMADE RADIATION ARE HARMFUL including ultrasonic radiation, radiowaves, microwaves, and millimeter waves – and that includes 2G, 3G, 4G, and 5G.

There are tens of thousands of studies documenting this (see also [here](#) and [here](#)). But we have been lied to incessantly about this fact and the time is now to set the record straight.

The symptoms people are experiencing that are being attributed to a “virus” are the exact same symptoms of radiation sickness. Just look at these symptoms!

- [loss of taste and smell](#)
- [stroke and seizures](#)
- [“fizzing” and an electrical feeling on the skin](#)
- [a burning feeling on the skin](#) (which is EXACTLY what happens with [5G military weapons](#))
- [neurological problems such as dizziness, headaches and impaired consciousness](#)
- [heart problems](#) and [heart attacks](#) (which are CLEARLY [a result of exposure to PULSED MICROWAVES](#) that disrupt the electrical signaling of the human body – see also [here](#))
- [damage to men’s testicles!!!](#) (in case you did not know – exposure to any form of manmade radiation [destroys male fertility](#))
- [clotting of the blood](#) that immediately makes me think of what happens to the blood when it is exposed to the 2.45 GHz frequency used for wifi, cell phones, baby monitors, etc.

[Source](#)

Respiratory problems are also being association with this virus, but in fact, are much more likely to be caused by exposure to [4G devices](#) and also 5G (see below for a slew of information regarding the 60 GHz 5G frequency interfering with the body’s ability to absorb oxygen).

Listen to the woman below describe her symptoms, all of which are clearly signs of RADIATION SICKNESS but that the medical establishment is claiming are the result of a virus. From a facebook post. Link not provided.

Back in March, right before everything shut down in my state, my husband went to lunch with a friend. A few days later, his friend started feeling very sick. A few days after that,

*my husband started feeling slightly sick for a day or two himself, and then I got brutally ill. His friend called later that week to tell us he tested positive for COVID. I spent weeks thinking I was actually going to die. I couldn't get tested anywhere no matter how sick I was, and when I could barely breathe my doctor told me "whatever you do, don't go to the hospital" . There were several nights where my husband packed my things for the hospital and watched me to see if I would get to a critical enough state that he needed to call 911. I was close so many times, but I'm here, and I'm suffering long term symptoms. I'm a "long hauler". One thing I noticed is that my fingers feel like they're getting chemical burns when I use my touch screen or phone for longer than a few minutes at a time. I would honestly believe my skin was actually starting to blister, and I would constantly check my hands to find out everything was in tact and unharmed. I work from my computer, and I noticed that at the end of the day I would start getting severe stroke-like symptoms. On the days I wasn't using my computer much, I would be mostly fine. My mom and aunt ordered those gun sensor thermometers, and I HATE THEM. I keep telling them to stop checking my temp with them because they feel like they're burrowing a hole into my brain. It sets me off. They think I'm insane. I had let them check my baby a couple times with it, but now I'm terrified of it. I don't want it anywhere near my baby's head. I notice when I'm able to take gentle walks with my baby, the closer I get to certain areas the more stroke-like symptoms I get. I was walking with my husband yesterday and I couldn't finish my conversation. I started having severe nerve pain, walking diagonally, dim vision, severe headache, slurred speech. We went to the shore and the only time I seem to feel well is in the morning on the beach, so sometimes I just go to the beach with my phone in airplane mode and sit in the sand for a while not touching any electronics. **My brain and whole body feels like it's buzzing all the time. I do genuinely believe I've suffered severe nerve and vascular damage from this, and now I'm painfully sensitive to electronics.** I can feel when electronics turn on in my house. My husband loves the air fryer, and I have to make sure I'm a safe distance away from it or I get awful headaches. I mean, I have way more going on than just this, but I notice my stroke-like symptoms only seem to happen or become more severe around electronics or EMFs. It's a nightmare... honestly. I don't know what I'm looking for here, but I just needed to vent.*

And note that children, too, are becoming ill with symptoms of radiation sickness that the lying medical establishment is calling a "virus" or "Kawasaki disease."

Children are appearing with "multi-system inflammation with flu-like symptoms," and "with blood parameters consistent with severe COVID-19." The children may be agitated, confused, have severe difficulty breathing, have seizures, low blood pressure, inflammation of the heart, abdominal pain, skin rash and, especially in teenage boys, testicular pain. The disease is being called a variant of either toxic shock syndrome or Kawasaki disease. But the symptoms are all classic effects of radio wave sickness. Arthur Firstenberg – [Source](#)

Friends, I believe there is a MASSIVE cover-up happening right now and if we do not expose it, then shame on us. Several studies have already demonstrated a connection between the 5G rollout and the prevalence of "COVID 19" (see [here](#), [here](#), and [here](#)).

Frankly, I DON'T THINK THERE IS ANY DEADLY VIRUS AND THE VIRUS STORY IS NOT ONLY A COMPLETE FABRICATION, BUT A REVERSAL OF TRUTH. The facts are below.

The speed with which the emergency declarations were made, combined with the fact that there was no emergency, clearly indicate that this “viral pandemic” is completely fictitious and something else is going on.

Of course, the dark ones are gearing up to introduce yet another allegedly “life-saving” vaccine, and they are rubbing their hands together with glee, imagining that this latest “viral pandemic” will be the one that will finally enable them to mandate vaccines around the globe.

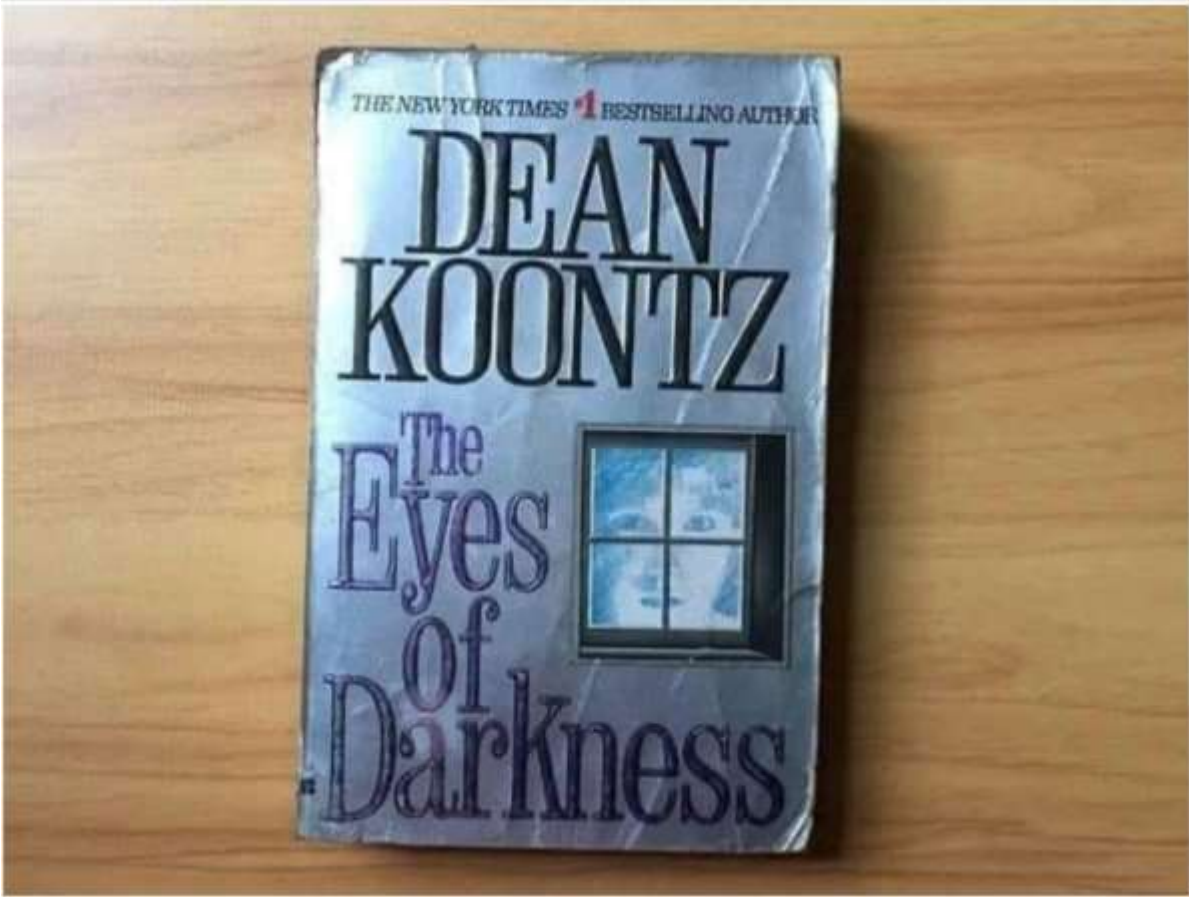
The CDC produced test kits that were contaminated with a lab-created coronavirus. UK tests were also contaminated. Canada also was caught with contaminated test kits. And if that were not enough, the tests are completely bogus anyway and do not really detect any virus.

What is happening is that people are developing various symptoms of radiation sickness and governments worldwide are blaming it on a fictitious virus.

Notice how people have their faces in their phones. The people believe that wearing masks will protect them from a non-existent viral threat. Yet, in Truth, their radiation-emitting devices will weaken their immune systems and make them more vulnerable to becoming deathly ill.

It is important to note that the dark ones have been planning to unleash this so-called “viral” threat for decades. The images you are about to see are what is called *“revelation of the method”* — the process by which the psychopathic *“elite”* tell us ahead of time what they plan to do. They make these announcements ahead of time because, in their warped and twisted minds, they believe if they tell us what they are going to do and we do not object, then they have our tacit or implied consent and therefore, cannot be held spiritually accountable or liable for the harm they cause since we were all OK with it.

Behold the insanity of those who deviously plan over decades and centuries about the ways they intend to harm us and/or gain control over us. This book was published in 1981.



THE EYES OF DARKNESS * 333

"I'm not interested in the philosophy or morality of biological warfare," Tina said. "Right now I just want to know how the hell Danny wound up in this place."

"To understand that," Dombey said, "you have to go back twenty months. It was around then that a Chinese scientist named Li Chen defected to the United States, carrying a diskette record of China's most important and dangerous new biological weapon in a decade. They call the stuff 'Wuhan-400' because it was developed at their RDNA labs outside of the city of Wuhan, and it was the four-hundredth viable strain of man-made microorganisms created at that research center.

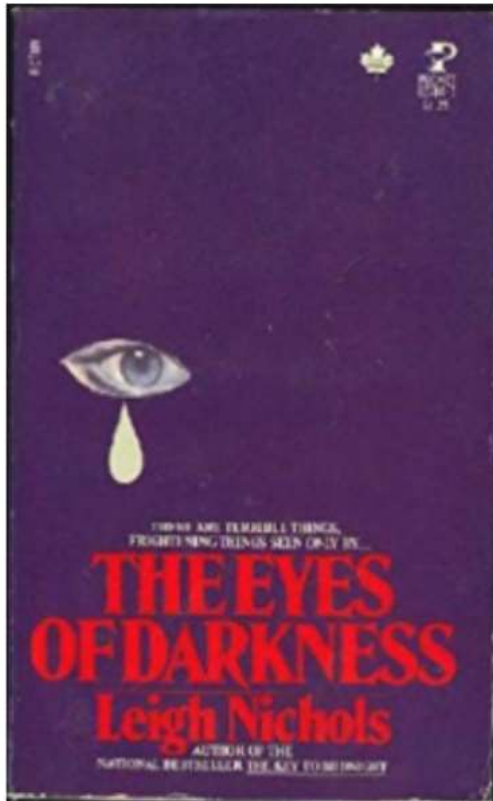
"Wuhan-400 is a perfect weapon. It afflicts only human beings. No other living creature can carry it. And like syphilis, Wuhan-400 can't survive outside a living human body for longer than a minute, which means it can't permanently contaminate objects or entire places the way anthrax and other virulent microorganisms can. And when the host expires, the Wuhan-400 within him perishes a short while later, as soon as the temperature of the corpse drops below eighty-six degrees Fahrenheit. Do you see the advantage of all this?"

Tina was too busy with Danny to think about what Carl Dombey had said, but Elliot knew what the scientist meant. "If I understand you, the Chinese could use Wuhan-400 to wipe out a city or a country, and then there wouldn't be any need for them to conduct a tricky and expensive decontamination before they moved in and took over the conquered territory."

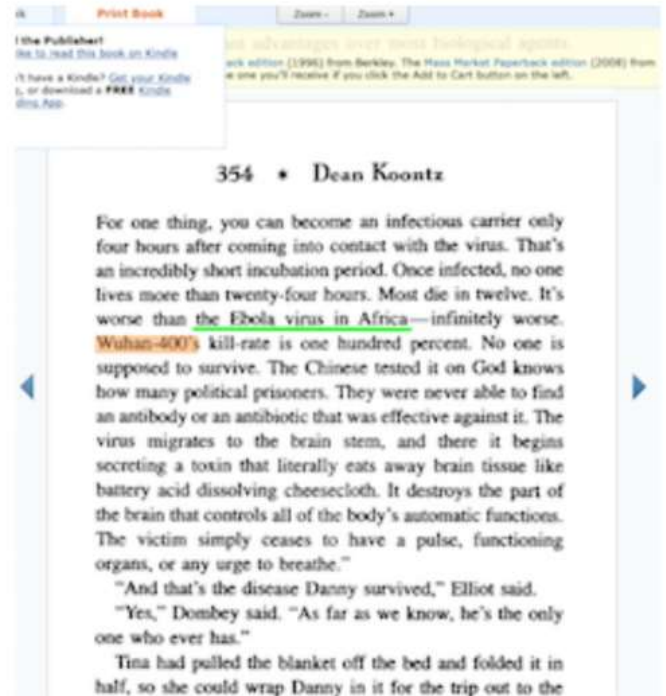
Dombey said. "And Wuhan-400 has other advantages over most biological agents."

"Koontz" has apparently written many books under various pseudonyms. And so it was the case with *'The Eyes of Darkness'*, which was originally released in 1981 under the fake name of Leigh Nichols. Not only does this book mention a

“bioweapon” from Wuhan, China, but on the very next page, also mentions the “ebola virus” from Africa.

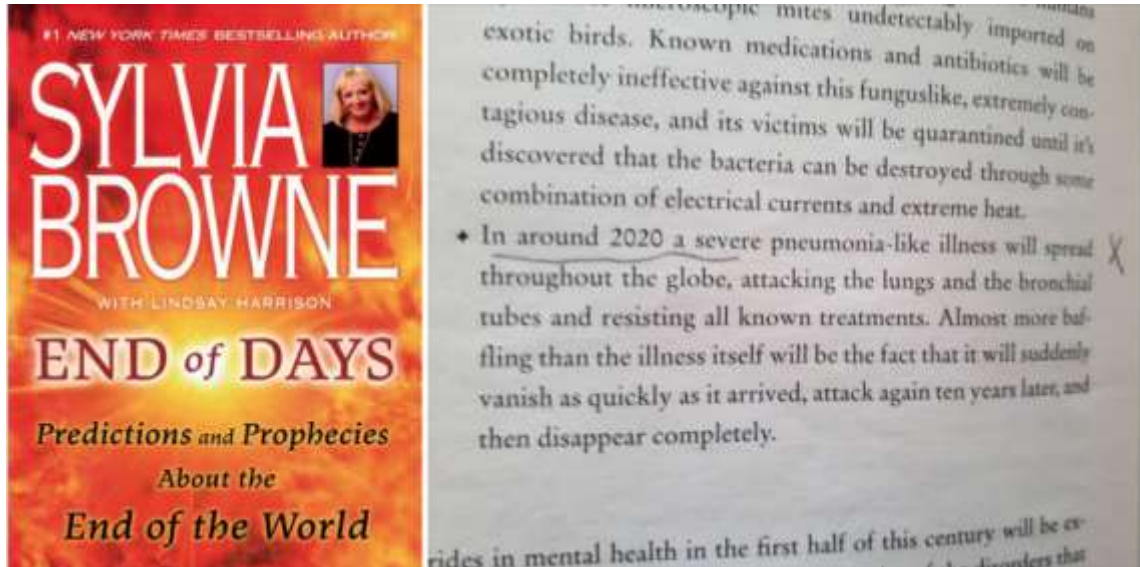


*Original title and pseudonym
published in 1981*



*The Eyes of Darkness p. 354
Click image to enlarge*

Even more interesting is the fact Dean Koontz is not the only author to ‘predict’ this nasty “virus.” According to [The Sun Daily](#), author Sylvia Browne published a book in 2008 called *End of Days: Predictions and Prophecies About the End of the World*. Check out her “prediction”!!!!



Source: [The Sun Daily](#)

On top of all of this, the psychopaths actually staged a pandemic “exercise” (otherwise called a drill) called Event 201 in New York in October of 2019.

Event 201 was a 3.5-hour pandemic tabletop exercise that simulated a series of dramatic, scenario-based facilitated discussions, confronting difficult, true-to-life dilemmas associated with response to a hypothetical, but scientifically plausible, pandemic. 15 global business, government, and public health leaders were [players](#) in the simulation exercise that highlighted unresolved real-world policy and economic issues that could be solved with sufficient political will, financial investment, and attention now and in the future.

The exercise consisted of pre-recorded news broadcasts, live “staff” briefings, and moderated discussions on specific topics. These issues were carefully designed in a compelling narrative that educated the participants and the audience.

[Source](#)

And... 10,000 military personnel from 110 nations gathered in Wuhan, China on the exact same day for the “2019 Military World Games“!

One aspect which is very interesting and has been covered extensively here, is Event 201. The pandemic exercise simulating a global Coronavirus pandemic which took place on October 18th 2019 only 6 weeks before the first case of the virus was reported in Wuhan China. What not many people are talking about, is that on this exact same day, October 18th, the 2019 Military World Games held its opening ceremony followed by a U.S. men’s soccer match in Wuhan China, ground zero of the outbreak!

[Source](#)

You cannot make this stuff up folks! They have been planning this Hollywood-style plandemic for a long time.

What these psychopaths are actually doing is literally causing illness with their microwave and millimeter weapons, while simultaneously hiding the real cause of the illnesses people are suffering by claiming they are due to a “virus.”

So let’s take a moment to decode the word “coronavirus”, and notice first that the word “virus” means “poison” and the word “corona” is used to describe the RADIATION FIELD that is sometimes emitted by high voltage devices! (See [here](#), [here](#) and [here](#) for more info).

Thus the word CORONAVIRUS literally means RADIATION POISONING!

A corona discharge is an electrical discharge brought on by the ionization of a fluid such as air surrounding a conductor that is electrically charged. Spontaneous corona discharges occur naturally in high-voltage systems unless care is taken to limit the electric field strength... In many high voltage applications, corona is an unwanted side effect. Corona discharge from high voltage electric power transmission lines constitutes an economically significant waste of energy for utilities. In high voltage equipment like Cathode Ray Tube televisions, radio transmitters, X-ray machines, and particle accelerators the current leakage caused by coronas can constitute an unwanted load on the circuit. In the air, coronas generate gases such as ozone (O₃) and nitric oxide (NO), and in turn, nitrogen dioxide (NO₂), and thus nitric acid (HNO₃) if water vapor is present. These gases are corrosive and can degrade and embrittle nearby materials, and are also toxic to humans and the environment.

[Source](#)

Corona is the field around high voltage electricity. It is the breach of the Corona Field that is the basis of Lightning.

Corona (radiation) kills most high voltage electricians by the time they are 55 years old.

Corona severely damages the reproductive cells in the liver.

Corona causes sterility, miscarriages and infertility.

Corona is an EMF field that is generated close to high voltage power transmission.

Now, they have labeled those symptoms, to be caused by a "viral" attack called "Corona Virus".

Coincidence that "5G" will cause all those symptoms of Corona Field Exposure ?

BUT WAIT !

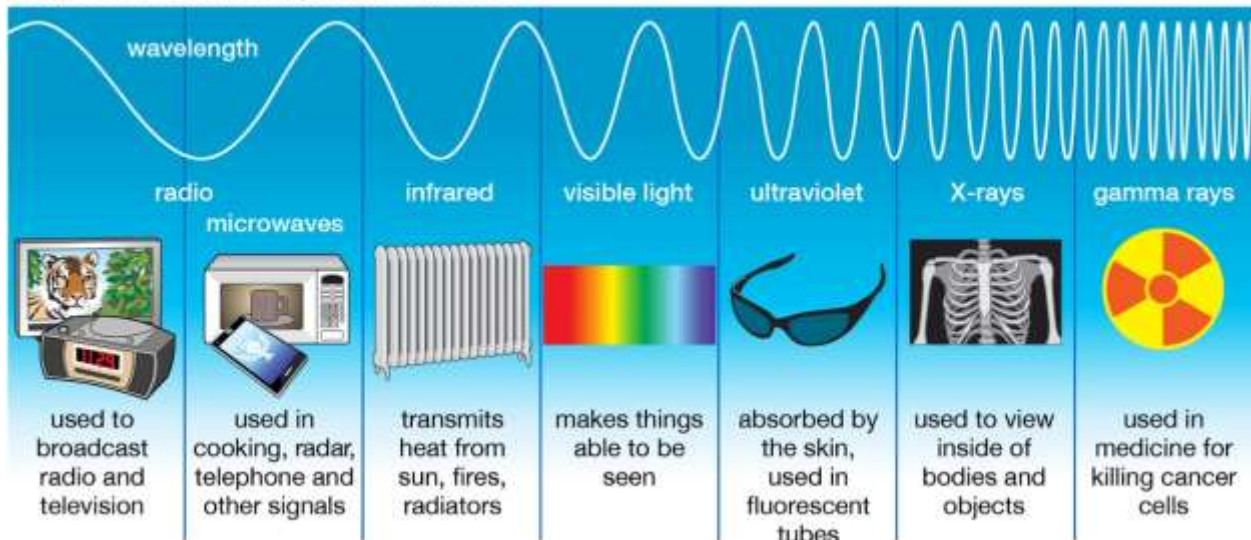
They have a "chemical injection" to cure you from the harmful reactions to radiation upon your reproductive cells, take note: death is a common "side effect" of their "cure".

[Source](#)

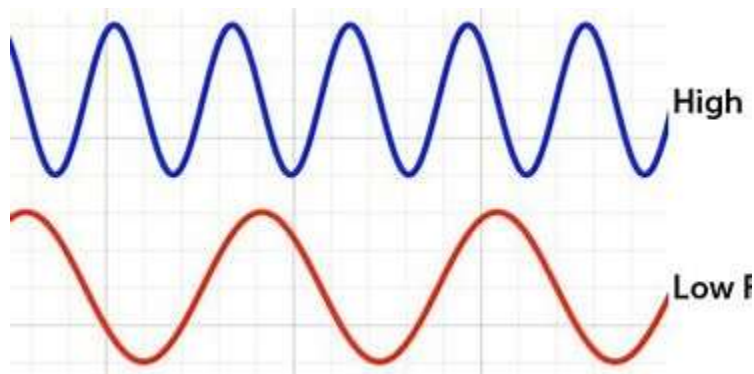
Is it just a coincidence then that the symptoms of this "virus" match precisely the symptoms of radiation sickness which symptoms are no doubt being brought on by increased cell tower density and the 5G rollout which has happened in Wuhan (see [here](#) and [here](#)) and [other parts of China](#). See also [here](#) for a plethora of information about the radiation situation in China.

Look at this picture analysis of what is happening with the **5G** roll-out in America and the places where people have gotten sick with this “virus.”

Types of Electromagnetic Radiation



© 2013 Encyclopædia Britannica, Inc.



This is all about radio waves and frequencies. Since few people understand what they are using, it becomes difficult to get it through to people what it is that is making them ill and resulting in death. I am including a number of graphics and illustrations that will help you to interpret just what is happening to the human body when subjected to radio waves and frequencies.

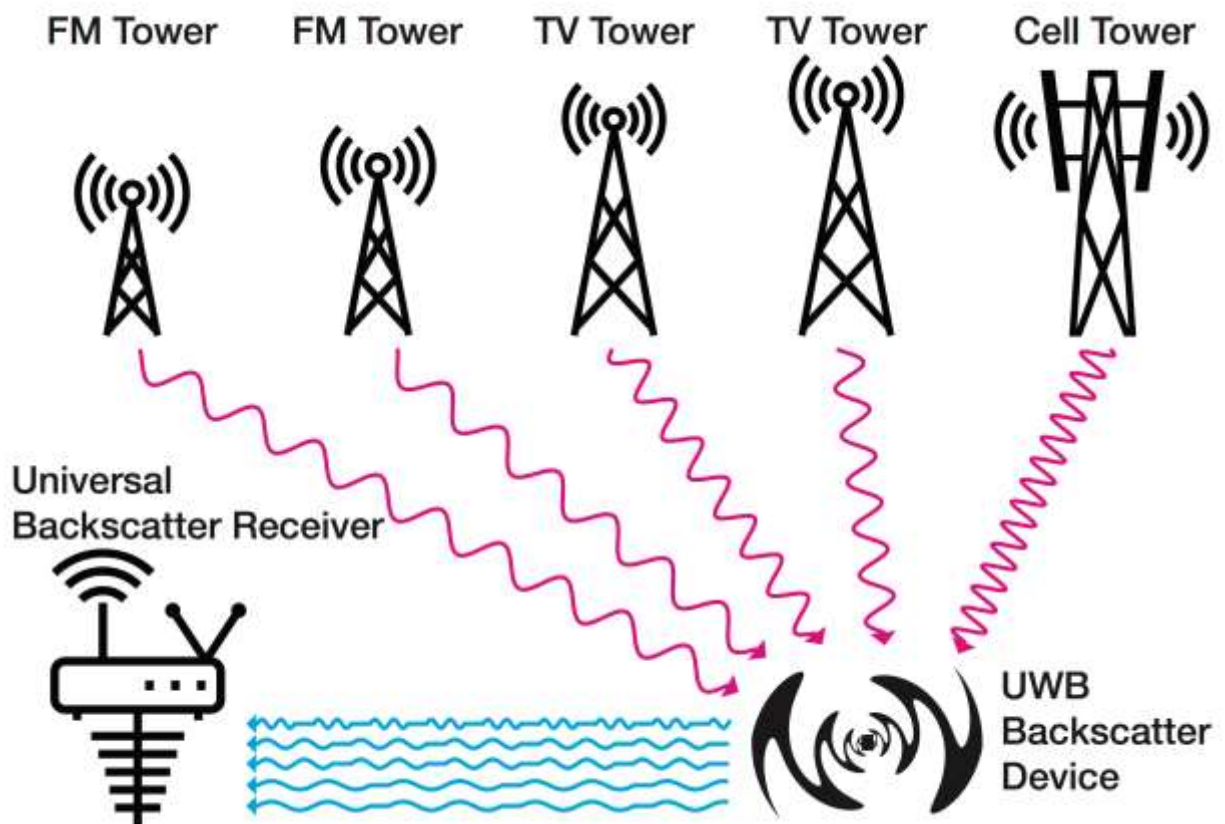
The following key points will help you understand and grasp:

1. Wavelength is the distance between sound waves while frequency is the number of times in which the sound wave occurs.
2. Wavelength is used to measure the length of sound waves while frequency is used to measure the recurrence of sound waves.

3. Wavelength can be determined depending upon the crests, troughs, or zero crossings through which sound passes while frequency can be determined by the number of times sound hits a peak or trough.

4. Wavelength is a measure of distance while frequency is a measure of time.

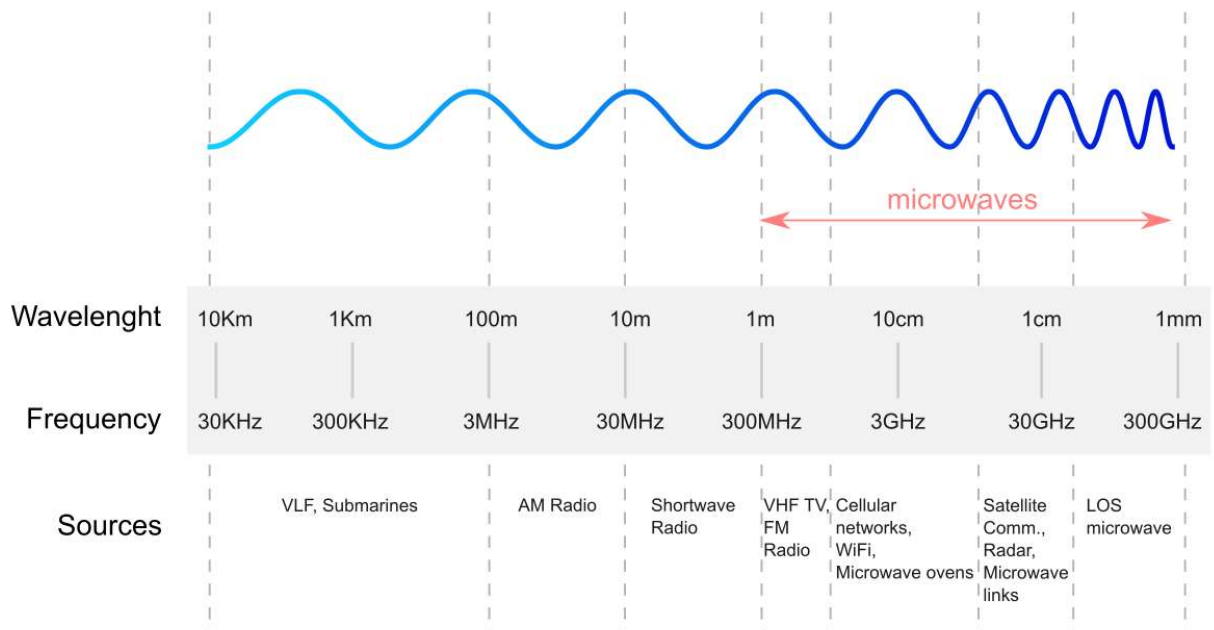
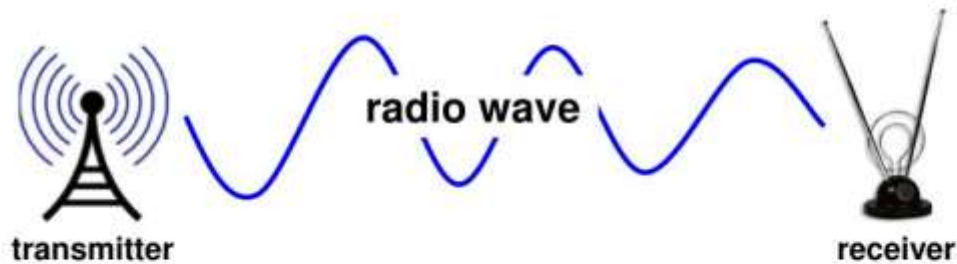
5. The International System of Units (SI) unit of wavelength is the meter (m) while the SI unit of frequency is the hertz (Hz).

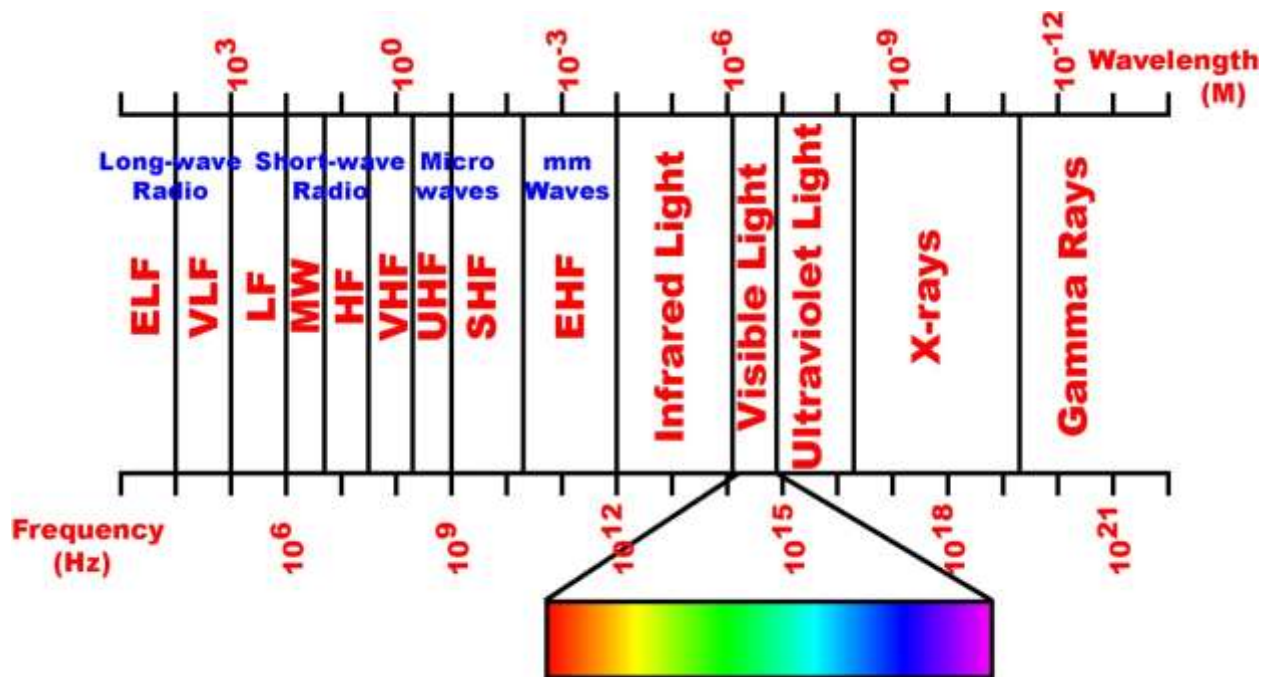
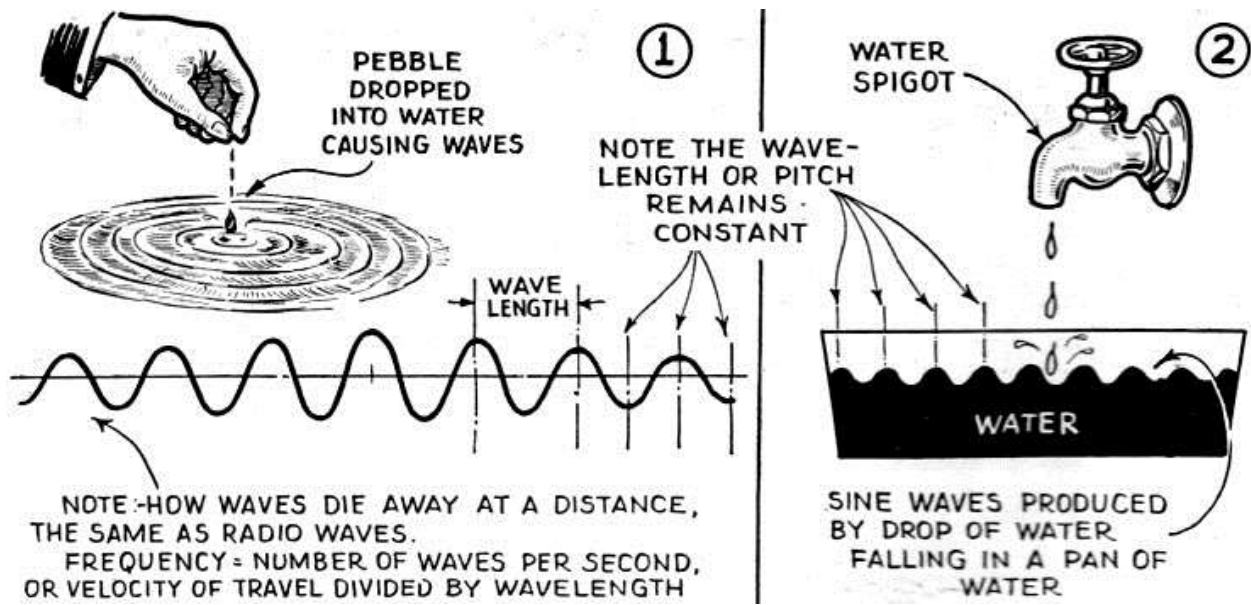


Transmitting and receiving radio waves

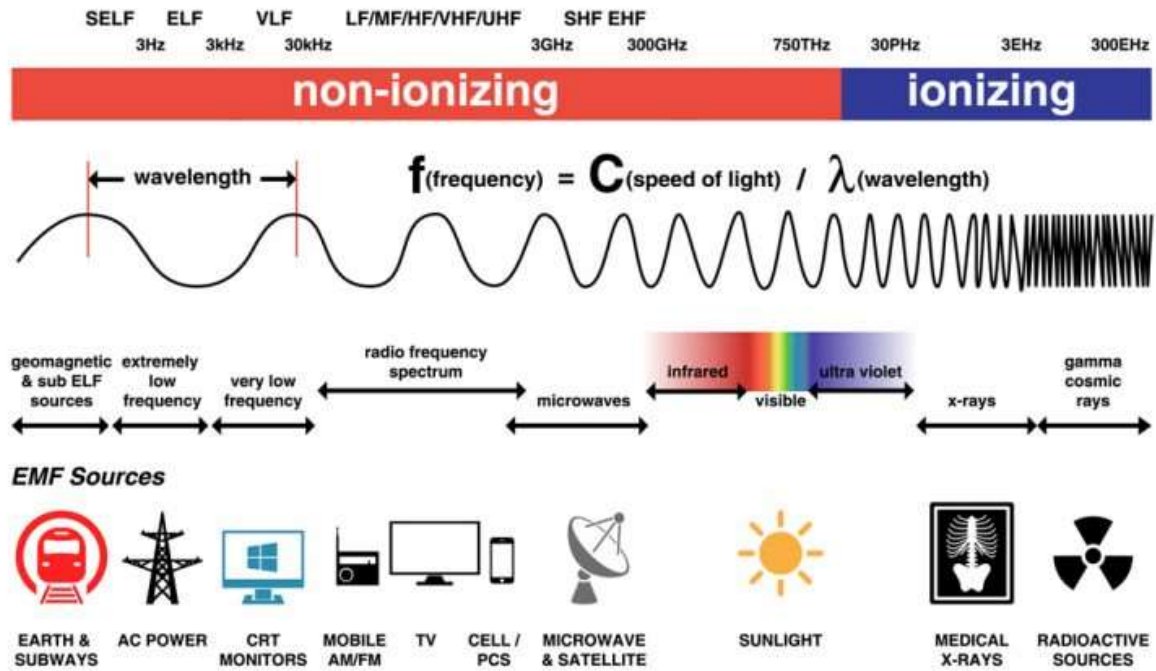
Radio waves are emitted from a transmitter aerial when an alternating voltage is connected to the aerial. The radio wave emitted has the same frequency as the alternating voltage.

When these radio waves pass across a receiver aerial, they cause a tiny alternating voltage of the same frequency to occur in the aerial.





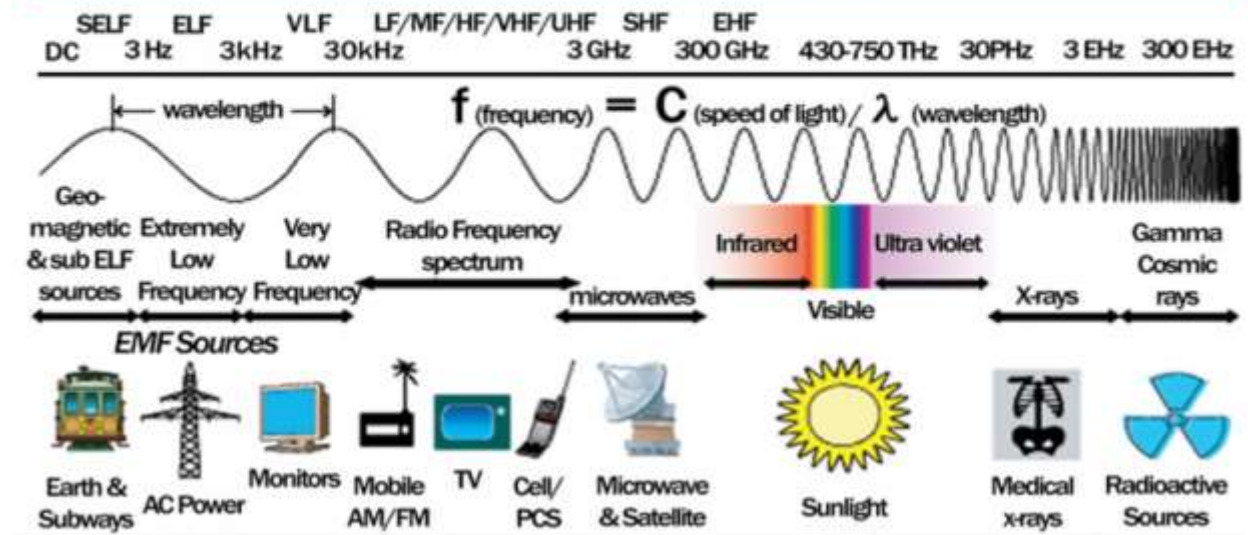
THE ELECTROMAGNETIC SPECTRUM

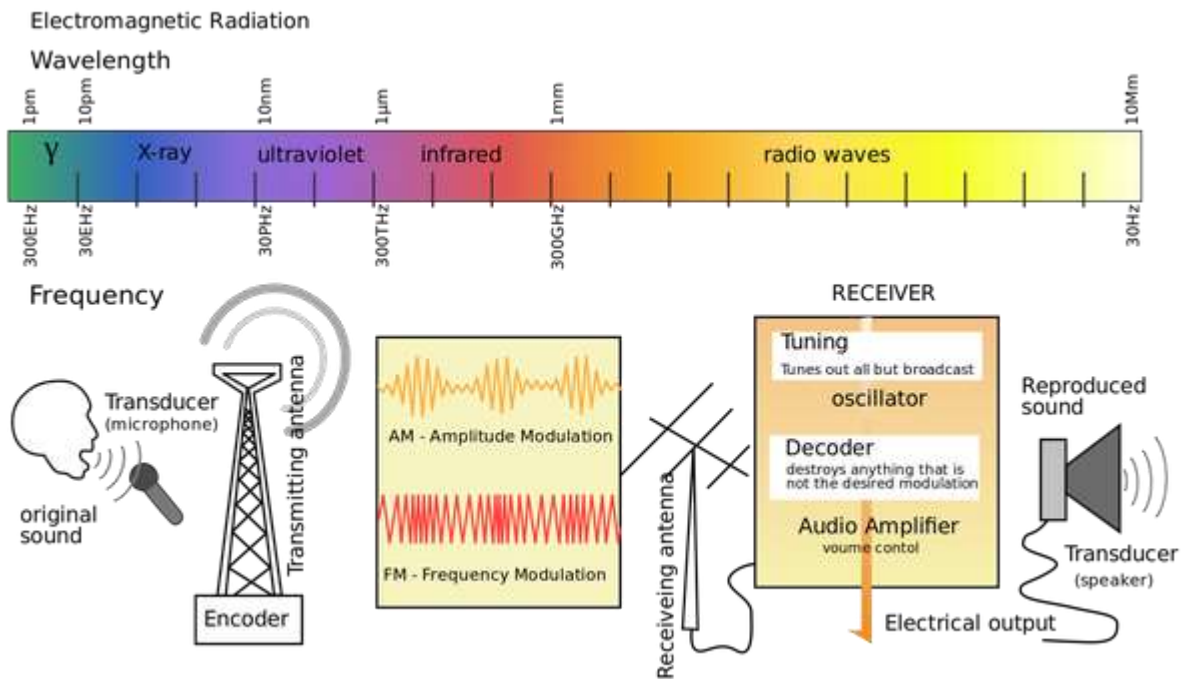


Gigahertz (GHz) 10⁹ Terahertz (THz) 10¹² Petahertz (PHz) 10¹⁵ Exahertz (EGz) 10¹⁸ Zettahertz (ZHHz) 10²¹ Yottahertz(YHHz) 10²⁴

THE ELECTROMAGNETIC SPECTRUM

We are surrounded by electromagnetic radiation (EMR) like never before.
 Studies link EMR to Cancer, Alzheimer's, Autism, chronic fatigue, headaches and other health issues.





Electronics heat up because of the slight inefficiency of the electricity-conducting components inside. This is because all of the metals used in everyday electronics, under normal conditions, have some resistance. That means that some of the energy that is in that wire will get transferred into heat. Over time, that heat builds up, making that particular electronic device get hot.

Then, the device can then be cooled in all sorts of ways. A simple cooling method is just to use a fan to blow away the hot air around the electronics, allowing the electronic components to continuously disperse the heat into the surrounding air.



Other systems can also be used, such as pumping cooled fluid (usually water) through tubes that pass around the warm components, allowing them to cool.

Another method of cooling, usually used in combination with a fan, is a heat sink. These absorb the heat and distribute it across the several blades in order to increase the surface area for more efficient cooling. (One can be seen under the fan in the previous picture if you look closely.)



Of course, you can essentially cool electronics in any way you would cool something else.

Some climate change skeptics have suggested that if there was global warming it was being caused by existing cellphone radio frequency transmissions in the atmosphere. Their greatest concern was how **5G** would intensify the problem. There is little in the way of literature on an alternative theory to why climate change is happening. Much to my surprise, I found a site devoted to this subject describing how microwave radio frequencies are polluting the atmosphere to cause what it describes as ***“Global RF Heating and erratic weather patterns.”***

So what is the theory?

It postulates that microwaves used by wireless, radar, mobile, and satellite systems create a constant wave bombardment that causes molecular friction leading to warming and erratic weather changes.

What produces these microwaves?

Cell towers, radar systems, GPS satellites and ground stations, weather stations, and secret military projects like the High Frequency Active Auroral Research Program run by the U.S. Department of Defense. The coincidences are interesting between the rise in global temperatures and the proliferation of the use of these technologies beginning as

early as the 1950s. Of course, the same coincidence exists in the rise of greenhouse gas emissions correlated to global warming.

So how would microwaves contribute to atmospheric heating and erratic weather?

The Earth's magnetic field traps microwaves in the atmosphere. The vast majority of what we produce cannot escape into space. The concentration of microwaves interacts with molecules and atoms in the air causing ionization which frees an electron to interact with other molecules in the atmosphere producing heat much the way a microwave oven heats objects placed inside it. But please note, microwaves heat solid or liquid objects, not the air.

The fact that the rise of radio frequency transmission volumes coincides with the growth of atmospheric greenhouse gas emissions adds confusion to the theory's viability of course. As does the nature of the spectrum of radio frequencies used in cellular communication. The reality is that radio frequency (RF) used by radio, television, computer, and cellular networks is non-ionizing unlike x-rays, gamma rays, and high energy ultraviolet radiation. Recent research in the past year or two has suggested this may not really be the case since exposure is cumulative, regardless of how low the dose being absorbed.

RF radiation exists in nature as well as is manufactured by our technical civilization. Nature delivers it from space, in lightning strikes during thunderstorms, and emanating from the Earth in small amounts as well.

Human-created Radio Frequency (RF) is ubiquitous coming from radio and television signals, radar, Wi-Fi, Bluetooth, microwave ovens, medical procedures, diagnostic imaging, welding, and cell towers. The theory postulates that life and the atmosphere through repeated exposure is altered.

Does the science support this theory?

Those who postulate it have produced little in the way of scientific evidence to support the theory. That does not mean that it is something to research or that it is not valid. We simply are in uncharted waters. The people who work with the HAARP program may have information that is either unavailable or classified from view.

No peer-reviewed journal paper or experiment on the subject has been found. Not one proof, statistical chart, or graph to show how the two are interlinked.

Some content from the American Cancer Society, however, where there is a summary of research into RF exposure and a potential causal link to cancer. But even here the research concluded there is no evidence to risk for those highly exposed to RF radiation in the workplace or from the use of cell phones. And frankly, if microwaves and other forms of RF radiation were to be a problem, one would think close proximity to the source would present the greatest risk. But once again, RF exposure doesn't seem to have any consequential or unintended impact.

The first major scientific paper published that offers evidence for a connection between coronavirus disease-19 and exposure to radiofrequency radiation from wireless communications including 5G was presented recently by [Beverly Rubik](#)^{1,2,*} and [Robert R. Brown](#)³

Abstract

Background and Aim:

Coronavirus disease (COVID-19) public health policy has focused on the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus and its effects on human health while environmental factors have been largely ignored. In considering the epidemiological triad (agent-host-environment) applicable to all disease, we investigated a possible environmental factor in the COVID-19 pandemic: ambient radiofrequency radiation from wireless communication systems including microwaves and millimeter waves. SARS-CoV-2, the virus that caused the COVID-19 pandemic, surfaced in Wuhan, China shortly after the implementation of city-wide (fifth generation [5G] of wireless communications radiation [WCR]), and rapidly spread globally, initially demonstrating a statistical correlation to international communities with recently established 5G networks. In this study, we examined the peer-reviewed scientific literature on the detrimental bio-effects of WCR and identified several mechanisms by which WCR may have contributed to the COVID-19 pandemic as a toxic environmental cofactor. By crossing boundaries between the disciplines of biophysics and pathophysiology, we present evidence that WCR may: (1) cause morphologic changes in erythrocytes including echinocyte and rouleaux formation that can contribute to hyper-coagulation; (2) impair microcirculation and reduce erythrocyte and hemoglobin levels exacerbating hypoxia; (3) amplify immune system dysfunction, including immunosuppression, autoimmunity, and hyper-inflammation; (4) increase cellular oxidative stress and the production of free radicals resulting in vascular injury and organ damage; (5) increase intracellular Ca²⁺ essential for viral entry, replication, and release, in addition to promoting pro-inflammatory pathways; and (6) worsen heart arrhythmias and cardiac disorders.

Relevance for Patients:

In short, WCR has become a ubiquitous environmental stressor that we propose may have contributed to adverse health outcomes of patients infected with SARS-CoV-2 and increased the severity of the COVID-19 pandemic. Therefore, we recommend that all people, particularly those suffering from SARS-CoV-2 infection, reduce their exposure to WCR as much as reasonably achievable until further research better clarifies the systemic health effects associated with chronic WCR exposure.

Keywords: COVID-19, Coronavirus, coronavirus disease-19, severe acute respiratory syndrome, coronavirus 2, electromagnetic stress, electromagnetic fields, environmental factor, microwave, millimeter wave, pandemic, public health, radio frequency, radiofrequency, wireless

[Go to:](#)

1. Introduction

1.1. Background

Coronavirus disease 2019 (COVID-19) has been the focus of international public health policy since 2020. Despite unprecedented public health protocols to quell the pandemic, the number of COVID-19 cases continues to rise. We propose a reassessment of our public health strategies.

According to the Center for Disease Control and Prevention (CDC), the simplest model of disease causation is the epidemiological triad consisting of three interactive factors: the agent (pathogen), the environment, and the health status of the host [1]. Extensive research is being done on the agent, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Risk factors that make a host more likely to succumb to the disease have been elucidated. However, environmental factors have not been sufficiently explored. In this paper, we investigated the role of wireless communication radiation (WCR), a widespread environmental stressor.

We explore the scientific evidence suggesting a possible relationship between COVID-19 and radiofrequency radiation related to wireless communications technology including fifth generation (5G) of wireless communications technology, henceforth referred to as WCR. WCR has already been recognized as a form of environmental pollution and physiological stressor [2]. Assessing the potentially detrimental health effects of WCR may be crucial to develop an effective, rational public health policy that may help expedite eradication of the COVID-19 pandemic. In addition, because we are on the verge of worldwide 5G deployment, it is critical to consider the possible damaging health effects of WCR before the public is potentially harmed.

5G is a protocol that will use high frequency bands and extensive bandwidths of the electromagnetic spectrum in the vast radiofrequency range from 600 MHz to nearly 100 GHz, which includes millimeter waves (>20 GHz), in addition to the currently used third generation (3G) and fourth generation (4G) long-term evolution (LTE) microwave bands. 5G frequency spectrum allocations differ from country to country. Focused pulsed beams of radiation will emit from new base stations and phased array antennas placed close to buildings whenever persons access the 5G network. Because these high frequencies are strongly absorbed by the atmosphere and especially during rain, a transmitter's range is limited to 300 meters. Therefore, 5G requires base stations and antennas to be much more closely spaced than previous generations. Plus, satellites in space will emit 5G bands globally to create a wireless worldwide web. The new system therefore requires significant densification of 4G infrastructure as well as new 5G antennas that may dramatically increase the population's WCR exposure both inside structures and outdoors. Approximately 100,000 emitting satellites are planned to be launched into orbit. This infrastructure will significantly alter the world's electromagnetic environment to unprecedented levels and may cause unknown consequences to the entire biosphere, including humans. The new infrastructure will service the new 5G devices, including 5G mobile phones, routers, computers, tablets, self-driving vehicles, machine-to-machine communications, and the Internet of Things.

The global industry standard for **5G** is set by the 3G Partnership Project (3GPP), which is an umbrella term for several organizations developing standard protocols for mobile telecommunications. The **5G** standard specifies all key aspects of the technology, including frequency spectrum allocation, beam-forming, beam steering, multiplexing multiple in, multiple out schemes, as well as modulation schemes, among others. 5G will utilize from 64 to 256 antennas at short distances to serve virtually simultaneously a large number of devices within a cell. The latest finalized **5G** standard, Release 16, is codified in the 3GPP published Technical Report TR 21.916 and may be downloaded from the 3GPP server at <https://www.3gpp.org/specifications>. Engineers claim that **5G** will offer performance up to 10 times that of current 4G networks [3].

COVID-19 began in Wuhan, China in December 2019, shortly after city-wide **5G** had “gone live,” that is, become an operational system, on October 31, 2019. COVID-19 outbreaks soon followed in other areas where **5G** had also been at least partially implemented, including South Korea, Northern Italy, New York City, Seattle, and Southern California. In May 2020, Mordachev [4] reported a statistically significant correlation between the intensity of radiofrequency radiation and the mortality from SARS-CoV-2 in 31 countries throughout the world. During the first pandemic wave in the United States, COVID-19 attributed cases and deaths were statistically higher in states and major cities with **5G** infrastructure as compared with states and cities that did not yet have this technology [5].

There is a large body of peer reviewed literature, since before World War II, on the biological effects of WCR that impact many aspects of our health. In examining this literature, we found intersections between the pathophysiology of SARS-CoV-2 and detrimental bio-effects of WCR exposure. Here, we present the evidence suggesting that WCR has been a possible contributing factor exacerbating COVID-19.

1.2. Overview on COVID-19

The clinical presentation of COVID-19 has proven to be highly variable, with a wide range of symptoms and variability from case to case. According to the CDC, early disease symptoms may include sore throat, headache, fever, cough, chills, among others. More severe symptoms including shortness of breath, high fever, and severe fatigue may occur in a later stage. The neurological sequela of taste and smell loss has also been described.

Ing *et al.* [6] determined 80% of those affected have mild symptoms or none, but older populations and those with comorbidities, such as hypertension, diabetes, and obesity, have a greater risk for severe disease [7]. Acute respiratory distress syndrome (ARDS) can rapidly occur [8] and cause severe shortness of breath as endothelial cells lining blood vessels and epithelial cells lining airways lose their integrity, and protein rich fluid leaks into adjacent air sacs. COVID-19 can cause insufficient oxygen levels (hypoxia) that have been seen in up to 80% of intensive care unit (ICU) patients [9] exhibiting respiratory distress. Decreased oxygenation and elevated carbon dioxide levels in patients’ blood have been observed, although the etiology for these findings remains unclear.

Massive oxidative damage to the lungs has been observed in areas of airspace opacification documented on chest radiographs and computed tomography (CT) scans in patients with SARS-CoV-2 pneumonia [10]. This cellular stress may indicate a biochemical rather than a viral etiology [11].

Because disseminated virus can attach itself to cells containing an angiotensin-converting enzyme 2 (ACE2) receptor; it can spread and damage organs and soft tissues throughout the body, including the lungs, heart, intestines, kidneys, blood vessels, fat, testes, and ovaries, among others. The disease can increase systemic inflammation and induce a hypercoagulable state. Without anticoagulation, intravascular blood clots can be devastating [12].

In COVID-19 patients referred to as “long-haulers,” symptoms can wax and wane for months [13]. Shortness of breath, fatigue, joint pain, and chest pain can become persistent symptoms. Post-infectious brain fog, cardiac arrhythmia, and new onset hypertension have also been described. Long-term chronic complications of COVID-19 are being defined as epidemiological data are collected over time.

As our understanding of COVID-19 continues to evolve, environmental factors, particularly those of wireless communication electromagnetic fields, remain unexplored variables that may be contributing to the disease including its severity in some patients. Next, we summarize the bio-effects of WCR exposure from the peer reviewed scientific literature published over decades.

1.3. Overview on bioeffects of WCR exposure

Organisms are electrochemical beings. Low-level WCR from devices, including mobile telephony base antennas, wireless network protocols utilized for the local networking of devices and internet access, trademarked as Wi-Fi (officially IEEE 802.11b Direct Sequence protocol; IEEE, Institute of Electrical and Electronic Engineers) by the Wi-Fi alliance, and mobile phones, among others, may disrupt regulation of numerous physiological functions. Non-thermal bioeffects (below the power density that causes tissue heating) from very low-level WCR exposure have been reported in numerous peer-reviewed scientific publications at power densities below the International Commission on Non-Ionizing Radiation Protection (ICNIRP) exposure guidelines [14]. Low-level WCR has been found to impact the organism at all levels of organization, from the molecular to the cellular, physiological, behavioral, and psychological levels. Moreover, it has been shown to cause systemic detrimental health effects including increased cancer risk [15], endocrine changes [16], increased free radical production [17], deoxyribonucleic acid (DNA) damage [18], changes to the reproductive system [19], learning and memory defects [20], and neurological disorders [21]. Having evolved within Earth’s extremely low-level natural radiofrequency background, organisms lack the ability to adapt to heightened levels of unnatural radiation of wireless communications technology with digital modulation that includes short intense pulses (bursts).

The peer-reviewed world scientific literature has documented evidence for detrimental bioeffects from WCR exposure including **5G** frequencies over several decades. The Soviet and Eastern European literature from 1960 to 1970s demonstrates significant biological effects, even at exposure levels more than 1000 times below 1 mW/cm², the current guideline for maximum public exposure in the US. Eastern studies on animal and human subjects were performed at low exposure levels (<1 mW/cm²) for long durations (typically months). Adverse bioeffects from WCR exposure levels below 0.001 mW/cm² have also been documented in the Western literature. Damage to human sperm viability including DNA fragmentation by internet-connected laptop computers at power densities from 0.0005 to 0.001 mW/cm² has been reported [22]. Chronic human exposure to 0.000006 – 0.00001 mW/cm² produced significant changes in human stress hormones following a mobile phone base station installation [23]. Human exposures to cell phone radiation at 0.00001 – 0.00005 mW/cm² resulted in complaints of headache, neurological problems, sleep problems, and concentration problems, corresponding to “microwave sickness” [24,25]. The effects of WCR on prenatal development in mice placed near an “antenna park” exposed to power densities from 0.000168 to 0.001053 mW/cm² showed a progressive decrease in the number of newborns and ended in irreversible infertility [26]. Most US research has been performed over short durations of weeks or less. In recent years, there have been few long-term studies on animals or humans.

Illness from WCR exposure has been documented since the early use of radar. Prolonged exposure to microwaves and millimeter waves from radar was associated with various disorders termed “radio-wave sickness” decades ago by Russian scientists. A wide variety of bio-effects from non-thermal power densities of WCR were reported by Soviet research groups since the 1960s. A bibliography of over 3700 references on the reported biological effects in the world scientific literature was published in 1972 (revised 1976) by the US Naval Medical Research Institute [27,28]. Several relevant Russian studies are summarized as follows. Research on *Escherichia coli* bacteria cultures show power density windows for microwave resonance effects for 51.755 GHz stimulation of bacterial growth, observed at extremely low power densities of 10⁻¹³ mW/cm² [29], illustrating an extremely low level bioeffect. More recently Russian studies confirmed earlier results of Soviet research groups on the effects of 2.45 GHz at 0.5 mW/cm² on rats (30 days exposure for 7 h/day), demonstrating the formation of antibodies to the brain (autoimmune response) and stress reactions [30]. In a long-term (1 – 4 year) study comparing children who use mobile phones to a control group, functional changes, including greater fatigue, decreased voluntary attention, and weakening of semantic memory, among other adverse psychophysiological changes, were reported [31]. Key Russian research reports that underlie the scientific basis for Soviet and Russian WCR exposure guidelines to protect the public, which are much lower than the US guidelines, have been summarized [32].

By comparison to the exposure levels employed in these studies, we measured the ambient level of WCR from 100 MHz to 8 GHz in downtown San Francisco, California in December, 2020, and found an average power density of 0.0002 mW/cm². This level is

from the superposition of multiple WCR devices. It is approximately 2×10^{10} times above the natural background.

Pulsed radio-frequency radiation such as WCR exhibits substantially different bio-effects, both qualitatively and quantitatively (generally more pronounced) compared to continuous waves at similar time-averaged power densities [33-36]. The specific interaction mechanisms are not well understood. All types of wireless communications employ extremely low frequency (ELFs) in the modulation of the radiofrequency carrier signals, typically pulses to increase the capacity of information transmitted. This combination of radiofrequency radiation with ELF modulation(s) is generally more bioactive, as it is surmised that organisms cannot readily adapt to such rapidly changing wave forms [37-40]. Therefore, the presence of ELF components of radiofrequency waves from pulsing or other modulations must be considered in studies on the bioeffects of WCR. Unfortunately, the reporting of such modulations has been unreliable, especially in older studies [41].

The BioInitiative Report [42], authored by 29 experts from ten countries, and updated in 2020, provides a scholarly contemporary summary of the literature on the bioeffects and health consequences from WCR exposure, including a compendium of supporting research. Recent reviews have been published [43-46]. Two comprehensive reviews on the bioeffects of millimeter waves report that even short-term exposures produce marked bioeffects [47,48].

[Go to:](#)

2. Methods

An ongoing literature study of the unfolding pathophysiology of SARS-CoV-2 was performed. To investigate a possible connection to bioeffects from WCR exposure, we examined over 250 peer-reviewed research reports from 1969 to 2021, including reviews and studies on cells, animals, and humans. We included the world literature in English and Russian reports translated to English, on radio frequencies from 600 MHz to 90 GHz, the carrier wave spectrum of WCR (2G to **5G** inclusive), with particular emphasis on nonthermal, low power densities ($<1 \text{ mW/cm}^2$), and long-term exposures.

The following search terms were used in queries in MEDLINE® and the Defense Technical Information Center (<https://discover.dtic.mil>) to find relevant study reports: radiofrequency radiation, microwave, millimeter wave, radar, MHz, GHz, blood, red blood cell, erythrocyte, hemoglobin, hemodynamic, oxygen, hypoxia, vascular, inflammation, pro-inflammatory, immune, lymphocyte, T cell, cytokine, intracellular calcium, sympathetic function, arrhythmia, heart, cardiovascular, oxidative stress, glutathione, reactive oxygen species (ROS), COVID-19, virus, and SARS-CoV-2. Occupational studies on WCR exposed workers were included in the study. Our approach is akin to Literature-Related Discovery, in which two concepts that have heretofore not been linked are explored in the literature searches to look for linkage(s) to produce novel, interesting, plausible, and intelligible knowledge, that is, potential discovery [49]. From analysis of these SARS studies in comparison with new information unfolding on the pathophysiology of SARS-CoV-2, we identified several ways in which

adverse bioeffects of WCR exposure intersect with COVID-19 manifestations and organized our findings into five categories.

[Go to:](#)

3. Results

[Table 1](#) lists the manifestations common to COVID-19 including disease progression and the corresponding adverse bioeffects from WCR exposure. Although these effects are delineated into categories — blood changes, oxidative stress, immune system disruption and activation, increased intracellular calcium (Ca²⁺), and cardiac effects — it must be emphasized that these effects are not independent of each other. For example, blood clotting and inflammation have overlapping mechanisms, and oxidative stress is implicated in erythrocyte morphological changes as well as in hypercoagulation, inflammation, and organ damage.

Table 1

Bioeffects of Wireless Communication Radiation (WCR) exposure in relation to COVID-19 manifestations and their progression

Wireless communications radiation (WCR) exposure bioeffects	COVID-19 manifestations
<p>Blood changes Short-term: rouleaux, echinocytes Long-term: reduced blood clotting time, reduced hemoglobin, hemodynamic disorders</p>	<p>Blood changes Rouleaux, echinocytes Hemoglobin effects; vascular effects →Reduced hemoglobin in severe disease; autoimmune hemolytic anemia; hypoxemia and hypoxia →Endothelial injury; impaired microcirculation; hypercoagulation; disseminated intravascular coagulopathy (DIC); pulmonary embolism; stroke</p>
<p>Oxidative stress Glutathione level decrease; free radicals and lipid peroxide increase; superoxide dismutase activity decrease; oxidative injury in tissues and organs</p>	<p>Oxidative stress Glutathione level decrease; free radical increase and damage; apoptosis→Oxidative injury; organ damage in severe disease</p>
<p>Immune system disruption and activation Immune suppression in some studies; immune hyperactivation in other studies Long-term: suppression of T-lymphocytes; inflammatory biomarkers increased; autoimmunity; organ injury</p>	<p>Immune system disruption and activation Decreased production of T-lymphocytes; elevated inflammatory biomarkers. →Immune hyperactivation and inflammation; cytokine storm in severe disease; cytokine-induced hypo-perfusion with resulting hypoxia; organ injury; organ failure</p>
<p>Increased intracellular calcium From activation of voltage-gated</p>	<p>Increased intracellular calcium →Increased virus entry, replication, and</p>

Wireless communications radiation (WCR) exposure bioeffects	COVID-19 manifestations
calcium channels on cell membranes, with numerous secondary effects	release →Increased NF-κB, pro-inflammatory processes, coagulation, and thrombosis
Cardiac effects Up-regulation of sympathetic nervous system; palpitations and arrhythmias	Cardiac effects Arrhythmias →Myocarditis; myocardial ischemia; cardiac injury; cardiac failure

Supportive evidence including study details and citations are provided in the text under each subject heading, i.e., blood changes, oxidative stress, etc.

3.1. Blood changes

WCR exposure can cause morphologic changes in blood readily seen through phase contrast or dark-field microscopy of live peripheral blood samples. In 2013, Havas observed erythrocyte aggregation including rouleaux (rolls of stacked red blood cells) in live peripheral blood samples following 10 min human exposure to a 2.4 GHz cordless phone [50]. Although not peer reviewed, one of us (Rubik) investigated the effect of 4G LTE mobile phone radiation on the peripheral blood of ten human subjects, each of whom had been exposed to cell phone radiation for two consecutive 45-min intervals [51]. Two types of effects were observed: increased stickiness and clumping of red blood cells with rouleaux formation, and subsequent formation of echinocytes (spiky red blood cells). Red blood cell clumping and aggregation are known to be actively involved in blood clotting [52]. The prevalence of this phenomenon on exposure to WCR in the human population has not yet been determined. Larger controlled studies should be performed to further investigate this phenomenon.

Similar red blood cell changes have been described in peripheral blood of COVID-19 patients [53]. Rouleaux formation has been observed in 1/3 of COVID-19 patients, whereas spherocytes and echinocyte formation is more variable. Spike protein engagement with ACE2 receptors on cells lining the blood vessels can lead to endothelial damage, even when isolated [54]. Rouleaux formation, particularly in the setting of underlying endothelial damage, can clog the microcirculation, impeding oxygen transport, contributing to hypoxia, and increasing the risk of thrombosis [52]. Thrombogenesis associated with SARS-CoV-2 infection may also be caused by direct viral binding to ACE2 receptors on platelets [55].

Additional blood effects have been observed in both humans and animals exposed to WCR. In 1977, a Russian study reported that rodents irradiated with 5 – 8 mm waves (60 – 37 GHz) at 1 mW/cm² for 15 min/day over 60 days developed hemodynamic disorders, suppressed red blood cell formation, reduced hemoglobin, and an inhibition of oxygen utilization (oxidative phosphorylation by the mitochondria) [56]. In 1978, a 3-year Russian study on 72 engineers exposed to millimeter wave generators emitting at

1 mW/cm² or less showed a decrease in their hemoglobin levels and red blood cell counts, and a tendency toward hypercoagulation, whereas a control group showed no changes [57]. Such deleterious hematologic effects from WCR exposure may also contribute to the development of hypoxia and blood clotting observed in COVID-19 patients.

It has been proposed that the SARS-CoV-2 virus attacks erythrocytes and causes degradation of hemoglobin [11]. Viral proteins may attack the 1-beta chain of hemoglobin and capture the porphyrin, along with other proteins from the virus catalyzing the dissociation of iron from heme [58]. In principle this would reduce the number of functional erythrocytes and cause the release of free iron ions that could cause oxidative stress, tissue damage, and hypoxia. With hemoglobin partially destroyed and lung tissue damaged by inflammation, patients would be less able to exchange carbon dioxide (CO₂) and oxygen (O₂), and would become oxygen depleted. In fact, some COVID-19 patients show reduced hemoglobin levels, measuring 7.1 g/L and even as low as 5.9 g/L in severe cases [59]. Clinical studies of almost 100 patients from Wuhan revealed that the hemoglobin levels in the blood of most patients infected with SARS-CoV-2 are significantly lowered resulting in compromised delivery of oxygen to tissues and organs [60]. In a meta-analysis of four studies with a total of 1210 patients and 224 with severe disease, hemoglobin values were reduced in COVID-19 patients with severe disease compared to those with milder forms [59]. In another study on 601 COVID-19 patients, 14.7% of anemic COVID-19 ICU patients and 9% of non-ICU COVID-19 patients had autoimmune hemolytic anemia [61]. In patients with severe COVID-19 disease, decreased hemoglobin along with elevated erythrocyte sedimentation rate (ESR), C-reactive protein, lactate dehydrogenase, albumin [62], serum ferritin [63], and low oxygen saturation [64] provide additional support for this hypothesis. In addition, packed red blood cell transfusion may promote recovery of COVID-19 patients with acute respiratory failure [65].

In short, both WCR exposure and COVID-19 may cause deleterious effects on red blood cells and reduced hemoglobin levels contributing to hypoxia in COVID-19. Endothelial injury may further contribute to hypoxia and many of the vascular complications seen in COVID-19 [66] that are discussed in the next section.

3.2. Oxidative stress

Oxidative stress is a non-specific pathological condition reflecting an imbalance between an increased production of ROS and an inability of the organism to detoxify the ROS or to repair the damage they cause to biomolecules and tissues [67]. Oxidative stress can disrupt cell signaling, cause the formation of stress proteins, and generate highly reactive free radicals, which can cause DNA and cell membrane damage.

SARS-CoV-2 inhibits intrinsic pathways designed to reduce ROS levels, thereby increasing morbidity. Immune dysregulation, that is, the upregulation of interleukin (IL)-6 and tumor necrosis factor α (TNF- α) [68] and suppression of interferon (IFN) α and IFN β [69] have been identified in the cytokine storm accompanying severe COVID-19 infections and generates oxidative stress [10]. Oxidative stress and mitochondrial

dysfunction may further perpetuate the cytokine storm, worsening tissue damage, and increasing the risk of severe illness and death.

Similarly low-level WCR generates ROS in cells that cause oxidative damage. In fact, oxidative stress is considered to be one of the primary mechanisms in which WCR exposure causes cellular damage. Among 100 currently available peer-reviewed studies investigating oxidative effects of low-intensity WCR, 93 of these studies confirmed that WCR induces oxidative effects in biological systems [17]. WCR is an oxidative agent with a high pathogenic potential especially when exposure is continuous [70].

Oxidative stress is also an accepted mechanism causing endothelial damage [71]. This may manifest in patients with severe COVID-19 in addition to increasing the risk for blood clot formation and worsening hypoxemia [10]. Low levels of glutathione, the master antioxidant, have been observed in a small group of COVID-19 patients, with the lowest level found in the most severe cases [72]. The finding of low glutathione levels in these patients further supports oxidative stress as a component of this disease [72]. In fact, glutathione, the major source of sulfhydryl-based antioxidant activity in the human body, may be pivotal in COVID-19 [73]. Glutathione deficiency has been proposed as the most likely cause of serious manifestations in COVID-19 [72]. The most common co-morbidities, hypertension [74]; obesity [75]; diabetes [76]; and chronic obstructive pulmonary disease [74] support the concept that pre-existing conditions causing low levels of glutathione may work synergistically to create the “perfect storm” for both the respiratory and vascular complications of severe infection. Another paper citing two cases of COVID-19 pneumonia treated successfully with intravenous glutathione also supports this hypothesis [77].

Many studies report oxidative stress in humans exposed to WCR. Peraica *et al.* [78] found diminished blood levels of glutathione in workers exposed to WCR from radar equipment ($0.01 \text{ mW/cm}^2 - 10 \text{ mW/cm}^2$; 1.5 – 10.9 GHz). Garaj-Vrhovac *et al.* [79] studied bioeffects following exposure to non-thermal pulsed microwaves from marine radar (3 GHz, 5.5 GHz, and 9.4 GHz) and reported reduced glutathione levels and increased malondialdehyde (marker for oxidative stress) in an occupationally exposed group [79]. Blood plasma of individuals residing near mobile phone base stations showed significantly reduced glutathione, catalase, and superoxide dismutase levels over unexposed controls [80]. In a study on human exposure to WCR from mobile phones, increased blood levels of lipid peroxide were reported, while enzymatic activities of superoxide dismutase and glutathione peroxidase in the red blood cells decreased, indicating oxidative stress [81].

In a study on rats exposed to 2450 MHz (wireless router frequency), oxidative stress was implicated in causing red blood cell lysis (hemolysis) [82]. In another study, rats exposed to 945 MHz (base station frequency) at 0.367 mW/cm^2 for 7 h/day, over 8 days, demonstrated low glutathione levels and increased malondialdehyde and superoxide dismutase enzyme activity, hallmarks for oxidative stress [83]. In a long-term controlled study on rats exposed to 900 MHz (mobile phone frequency) at 0.0782 mW/cm^2 for 2 h/day for 10 months, there was a significant increase in malondialdehyde

and total oxidant status over controls [84]. In another long-term controlled study on rats exposed to two mobile phone frequencies, 1800 MHz and 2100 MHz, at power densities 0.04 – 0.127 mW/cm² for 2 h/day over 7 months, significant alterations in oxidant-antioxidant parameters, DNA strand breaks, and oxidative DNA damage were found [85].

There is a correlation between oxidative stress and thrombogenesis [86]. ROS can cause endothelial dysfunction and cellular damage. The endothelial lining of the vascular system contains ACE2 receptors that are targeted by SARS-CoV-2. The resulting endotheliitis can cause luminal narrowing and result in diminished blood flow to downstream structures. Thrombi in arterial structures can further obstruct blood flow causing ischemia and/or infarcts in involved organs, including pulmonary emboli and strokes. Abnormal blood coagulation leading to micro-emboli was a recognized complication early in the history of COVID-19 [87]. Out of 184 ICU COVID-19 patients, 31% showed thrombotic complications [88]. Cardiovascular clotting events are a common cause of COVID-19 deaths [12]. Pulmonary embolism, disseminated intravascular coagulation (DIC), liver, cardiac, and renal failure have all been observed in COVID-19 patients [89].

Patients with the highest cardiovascular risk factors in COVID-19 include males, the elderly, diabetics, and obese and hypertensive patients. However, increased incidence of strokes in younger patients with COVID-19 has also been described [90].

Oxidative stress is caused by WCR exposure and is known to be implicated in cardiovascular disease. Ubiquitous environmental exposure to WCR may contribute to cardiovascular disease by creating a chronic state of oxidative stress [91]. This would lead to oxidative damage to cellular constituents and alter signal transduction pathways. In addition, pulse-modulated WCR can cause oxidative injury in liver, lung, testis, and heart tissues mediated by lipid peroxidation, increased levels of nitric oxides, and suppression of the antioxidant defense mechanism [92].

In summary, oxidative stress is a major component in the pathophysiology of COVID-19 as well as in cellular damage caused by WCR exposure.

3.3. Immune system disruption and activation

When SARS-CoV-2 first infects the human body, it attacks cells lining the nose, throat, and upper airway harboring ACE2 receptors. Once the virus gains access to a host cell through one of its spike proteins, which are the multiple protuberances projecting from the viral envelope that bind to ACE2 receptors, it converts the cell into a virus self-replicating entity.

In response to COVID-19 infection, both an immediate systemic innate immune response as well as a delayed adaptive response has been shown to occur [93]. The virus can also cause a dysregulation of the immune response, particularly in the decreased production of T-lymphocytes. [94]. Severe cases tend to have lower lymphocyte counts, higher leukocyte counts and neutrophil-lymphocyte ratios, as well

as lower percentages of monocytes, eosinophils, and basophils [94]. Severe cases of COVID-19 show the greatest impairment in T-lymphocytes.

In comparison, low-level WCR studies on laboratory animals also show impaired immune function [95]. Findings include physical alterations in immune cells, a degradation of immunological responses, inflammation, and tissue damage. Baranski [96] exposed guinea pigs and rabbits to continuous or pulse-modulated 3000 MHz microwaves at an average power density of 3.5 mW/cm² for 3 h/day over 3 months and found nonthermal changes in lymphocyte counts, abnormalities in nuclear structure, and mitosis in the erythroblastic cell series in the bone marrow and in lymphoid cells in lymph nodes and spleen. Other investigators have shown diminished T-lymphocytes or suppressed immune function in animals exposed to WCR. Rabbits exposed to 2.1 GHz at 5mW/cm² for 3 h/day, 6 days/week, for 3 months, showed suppression of T-lymphocytes [97]. Rats exposed to 2.45 GHz and 9.7 GHz for 2 h/day, 7 days/week, for 21 months showed a significant decrease in the levels of lymphocytes and an increase in mortality at 25 months in the irradiated group [98]. Lymphocytes harvested from rabbits irradiated with 2.45 GHz for 23 h/day for 6 months show a significant suppression in immune response to a mitogen [99].

In 2009, Johansson conducted a literature review, which included the 2007 Bioinitiative Report. He concluded that electromagnetic fields (EMF) exposure, including WCR, can disturb the immune system and cause allergic and inflammatory responses at exposure levels significantly less than current national and international safety limits and raise the risk for systemic disease [100]. A review conducted by Szmigielski in 2013 concluded that weak RF/microwave fields, such as those emitted by mobile phones, can affect various immune functions both *in vitro* and *in vivo* [101]. Although the effects are historically somewhat inconsistent, most research studies document alterations in the number and activity of immune cells from RF exposure. In general, short-term exposure to weak microwave radiation may temporarily stimulate an innate or adaptive immune response, but prolonged irradiation inhibits those same functions.

In the acute phase of COVID-19 infection, blood tests demonstrate elevated ESR, C-reactive protein, and other elevated inflammatory markers [102], typical of an innate immune response. Rapid viral replication can cause death of epithelial and endothelial cells and result in leaky blood vessels and pro-inflammatory cytokine release [103]. Cytokines, proteins, peptides, and proteoglycans that modulate the body's immune response, are modestly elevated in patients with mild-to-moderate disease severity [104]. In those with severe disease, an uncontrolled release of pro-inflammatory cytokines--a cytokine storm--can occur. Cytokine storms originate from an imbalance in T-cell activation with dysregulated release of IL-6, IL-17, and other cytokines. Programmed cell death (apoptosis), ARDS, DIC, and multi-organ system failure can all result from a cytokine storm and increase the risk of mortality.

By comparison, Soviet researchers found in the 1970s that radiofrequency radiation can damage the immune system of animals. Shandala [105] exposed rats to 0.5 mW/cm² microwaves for 1 month, 7 h/day, and found impaired immune competence

and induction of autoimmune disease. Rats irradiated with 2.45 GHz at 0.5 mW/cm² for 7 h daily for 30 days produced autoimmune reactions, and 0.1 – 0.5 mW/cm² produced persistent pathological immune reactions [106]. Exposure to microwave radiation, even at low levels (0.1 – 0.5 mW/cm²), can impair immune function, causing physical alterations in the essential cells of the immune system and a degradation of immunologic responses [107]. Szabo *et al.* [108] examined the effects of 61.2 GHz exposure on epidermal keratinocytes and found an increase in IL-1b, a pro-inflammatory cytokine. Makar *et al.* [109] found that immunosuppressed mice irradiated 30 min/day for 3 days by 42.2 GHz showed increased levels of TNF- α , a cytokine produced by macrophages.

In short, COVID-19 can lead to immune dysregulation as well as cytokine storms. By comparison, exposure to low-level WCR as observed in animal studies can also compromise the immune system, with chronic daily exposure producing immunosuppression or immune dysregulation including hyperactivation.

3.4. Increased intracellular calcium

In 1992, Walleczek first suggested that ELF electromagnetic fields (<3000 Hz) may be affecting membrane-mediated Ca²⁺ signaling and lead to increased intracellular Ca²⁺ [110]. The mechanism of irregular gating of voltage-gated ion channels in cell membranes by polarized and coherent, oscillating electric or magnetic fields was first presented in 2000 and 2002 [40,111]. Pall [112] in his review of WCR-induced bioeffects combined with use of calcium channel blockers (CCB) noted that voltage-gated calcium channels play a major role in WCR bioeffects. Increased intracellular Ca²⁺ results from the activation of voltage-gated calcium channels, and this may be one of the primary mechanisms of action of WCR on organisms.

Intracellular Ca²⁺ is essential for virus entry, replication, and release. It has been reported that some viruses can manipulate voltage-gated calcium channels to increase intracellular Ca²⁺ thereby facilitating viral entry and replication [113]. Research has shown that the interaction between a virus and voltage-gated calcium channels promote virus entry at the virus-host cell fusion step [113]. Thus, after the virus binds to its receptor on a host cell and enters the cell through endocytosis, the virus takes over the host cell to manufacture its components. Certain viral proteins then manipulate calcium channels, thereby increasing intracellular Ca²⁺, which facilitates further viral replication. Even though direct evidence has not been reported, there is indirect evidence that increased intracellular Ca²⁺ may be involved in COVID-19. In a recent study, elderly hospitalized COVID-19 patients treated with CCBs, amlodipine or nifedipine, were more likely to survive and less likely to require intubation or mechanical ventilation than controls [114]. Furthermore, CCBs strongly limit SARS-CoV-2 entry and infection in cultured epithelial lung cells [115]. CCBs also block the increase of intracellular Ca²⁺ caused by WCR exposure as well as exposure to other electromagnetic fields [112].

Intracellular Ca²⁺ is a ubiquitous second messenger relaying signals received by cell surface receptors to effector proteins involved in numerous biochemical processes.

Increased intracellular Ca^{2+} is a significant factor in upregulation of transcription nuclear factor κB (NF- κB) [116], an important regulator of pro-inflammatory cytokine production as well as coagulation and thrombotic cascades. NF- κB is hypothesized to be a key factor underlying severe clinical manifestations of COVID-19 [117].

In short, WCR exposure, therefore, may enhance the infectivity of the virus by increasing intracellular Ca^{2+} that may also indirectly contribute to inflammatory processes and thrombosis.

3.5. Cardiac effects

Cardiac arrhythmias are more commonly encountered in critically ill patients with COVID-19 [118]. The cause for arrhythmia in COVID-19 patients is multifactorial and includes cardiac and extra-cardiac processes [119]. Direct infection of the heart muscle by SARS-CoV-19 causing myocarditis, myocardial ischemia caused by a variety of etiologies, and heart strain secondary to pulmonary or systemic hypertension can result in cardiac arrhythmia. Hypoxemia caused by diffuse pneumonia, ARDS, or extensive pulmonary emboli represent extra-cardiac causes of arrhythmia. Electrolyte imbalances, intravascular fluid imbalance, and side effects from pharmacologic regimens can also result in arrhythmias in COVID-19 patients. Patients admitted to ICUs have been shown to have a higher increase in cardiac arrhythmias, 16.5% in one study [120]. Although no correlation between EMFs and arrhythmia in COVID-19 patients has been described in the literature, many ICUs are equipped with wireless patient monitoring equipment and communication devices producing a wide range of EMF pollution [121].

COVID-19 patients commonly show increased levels of cardiac troponin, indicating damage to the heart muscle [122]. Cardiac damage has been associated with arrhythmias and increased mortality. Cardiac injury is thought to be more often secondary to pulmonary emboli and viral sepsis, but direct infection of the heart, that is, myocarditis, can occur through direct viral binding to ACE2 receptors on cardiac pericytes, affecting local, and regional cardiac blood flow [60].

Immune system activation along with alterations in the immune system may result in atherosclerotic plaque instability and vulnerability, that is, presenting an increased risk for thrombus formation, and contributing to development of acute coronary events and cardiovascular disease in COVID-19.

Regarding WCR exposure bio-effects, in 1969 Christopher Dodge of the Biosciences Division, U.S. Naval Observatory in Washington DC, reviewed 54 papers and reported that radiofrequency radiation can adversely affect all major systems of the body, including impeding blood circulation; altering blood pressure and heart rate; affecting electrocardiograph readings; and causing chest pain and heart palpitations [123]. In the 1970s Glaser reviewed more than 2000 publications on radiofrequency radiation exposure bioeffects and concluded that microwave radiation can alter the electrocardiogram, cause chest pain, hypercoagulation, thrombosis, and hypertension in addition to myocardial infarction [27,28]. Seizures, convulsions, and alteration of the

autonomic nervous system response (increased sympathetic stress response) have also been observed.

Since then, many other researchers have concluded that WCR exposure can affect the cardiovascular system. Although the nature of the primary response to millimeter waves and consequent events are poorly understood, a possible role for receptor structures and neural pathways in the development of continuous millimeter wave-induced arrhythmia has been proposed [47]. In 1997, a review reported that some investigators discovered cardiovascular changes including arrhythmias in humans from long-term low-level exposure to WCR including microwaves [124]. However, the literature also shows some unconfirmed findings as well as some contradictory findings [125]. Havas *et al.* [126] reported that human subjects in a controlled, double-blinded study were hyper-reactive when exposed to 2.45 GHz, digitally pulsed (100 Hz) microwave radiation, developing either an arrhythmia or tachycardia and upregulation of the sympathetic nervous system, which is associated with the stress response. Sali *et al.* [127] found that exposure to Wi-Fi (2.45 GHz pulsed at 10 Hz) affects heart rhythm, blood pressure, and the efficacy of catecholamines on the cardiovascular system, indicating that WCR can act directly and/or indirectly on the cardiovascular system. Most recently, Bandara and Weller [91] present evidence that people who live near radar installations (millimeter waves: 5G frequencies) have a greater risk of developing cancer and experiencing heart attacks. Similarly, those occupationally exposed have a greater risk of coronary heart disease. Microwave radiation affects the heart, and some people are more vulnerable if they have an underlying heart abnormality [128]. More recent research suggests that millimeter waves may act directly on the pacemaker cells of the sinoatrial node of the heart to change the beat frequency, which may underlie arrhythmias and other cardiac issues [47].

In short, both COVID-19 and WCR exposure can affect the heart and cardiovascular system, directly and/or indirectly.

[Go to:](#)

4. Discussion

Epidemiologists, including those at the CDC, consider multiple causal factors when evaluating the virulence of an agent and understanding its ability to spread and cause disease. Most importantly, these variables include environmental cofactors and the health status of the host. Evidence from the literature summarized here suggests a possible connection between several adverse health effects of WCR exposure and the clinical course of COVID-19 in that WCR may have worsened the COVID-19 pandemic by weakening the host and exacerbating COVID-19 disease. However, none of the observations discussed here prove this linkage. Specifically, the evidence does not confirm causation. Clearly COVID-19 occurs in regions with little wireless communication. Furthermore, the relative morbidity caused by WCR exposure in COVID-19 is unknown.

We recognize that many factors have influenced the pandemic's course. Before restrictions were imposed, travel patterns facilitated the seeding of the virus, causing

early rapid global spread. Population density, higher mean population age, and socioeconomic factors certainly influenced early viral spread. Air pollution, especially particulate matter PM_{2.5} (2.5 micro-particulates), likely increased symptoms in patients with COVID-19 lung disease [129].

We postulate that WCR possibly contributed to the early spread and severity of COVID-19. Once an agent becomes established in a community, its virulence increases [130]. This premise can be applied to the COVID-19 pandemic. We surmise that “hot spots” of the disease that initially spread around the world were perhaps seeded by air travel, which in some areas were associated with 5G implementation. However, once the disease became established in those communities, it was able to spread more easily to neighboring regions where populations were less exposed to WCR. Second and third waves of the pandemic disseminated widely throughout communities with and without WCR, as might be expected.

The COVID-19 pandemic has offered us an opportunity to delve further into the potential adverse effects of WCR exposure on human health. Human exposure to ambient WCR significantly increased in 2020 as a “side effect” to the pandemic. Stay-at-home measures designed to reduce the spread of COVID-19 inadvertently resulted in greater public exposure to WCR, as people conducted more business and school related activities through wireless communications. Telemedicine created another source of WCR exposure. Even hospital inpatients, particular ICU patients, experienced increased WCR exposure as new monitoring devices utilized wireless communication systems that may exacerbate health disorders. It would potentially provide valuable information to measure ambient WCR power densities in home and work environments when comparing disease severity in patient populations with similar risk factors.

The question of causation could be investigated in future studies. For example, a clinical study could be conducted in COVID-19 patient populations with similar risk factors, to measure the WCR daily dose in COVID-19 patients and look for a correlation with disease severity and progression over time. As wireless device carrier frequencies and modulations may differ, and the power densities of WCR fluctuate constantly at a given location, this study would require patients to wear personal microwave dosimeters (monitoring badges). In addition, controlled laboratory studies could be conducted on animals, for example, humanized mice infected with SARS-CoV-2, in which groups of animals exposed to minimal WCR (control group) as well as medium and high power densities of WCR could be compared for disease severity and progression.

A major strength of this paper is that the evidence rests on a large body of scientific literature reported by many scientists worldwide and over several decades-- experimental evidence of adverse bioeffects of WCR exposure at nonthermal levels on humans, animals, and cells. The Bioinitiative Report [42], updated in 2020, summarizes hundreds of peer-reviewed scientific papers documenting evidence of nonthermal effects from exposures ≤ 1 mW/cm². Even so, some laboratory studies on the adverse health effects of WCR have sometimes utilized power densities exceeding 1mW/cm². In

this paper, almost all of the studies that we reviewed included experimental data at power densities ≤ 1 mW/cm².

A potential criticism of this paper is that adverse bioeffects from nonthermal exposures are not yet universally accepted in science. Moreover, they are not yet considered in establishing public health policy in many nations. Decades ago, Russians and Eastern Europeans compiled considerable data on nonthermal bioeffects, and subsequently set guidelines at lower radiofrequency radiation exposure limits than the US and Canada, that is, below levels where nonthermal effects are observed. However, the Federal Communications Commission (FCC, a US government entity) and ICNIRP guidelines operate on thermal limits based on outdated data from decades ago, allowing the public to be exposed to considerably higher radiofrequency radiation power densities. Regarding 5G, the telecommunication industry claims that it is safe because it complies with current radiofrequency radiation exposure guidelines of the FCC and ICNIRP. These guidelines were established in 1996 [131], are antiquated, and are not safety standards. Thus, there are no universally accepted safety standards for wireless communication radiation exposure. Recently international bodies, such as the EMF Working Group of the European Academy of Environmental Medicine, have proposed much lower guidelines, taking into account nonthermal bioeffects from WCR exposure in multiple sources [132].

Another weakness of this paper is that some of the bioeffects from WCR exposure are inconsistently reported in the literature. Replicated studies are often not true replications. Small differences in method, including unreported details, such as prior history of exposure of the organisms, non-uniform body exposure, and other variables can lead to inadvertent inconsistency. Moreover, not surprisingly, industry-sponsored studies tend to show less adverse bioeffects than studies conducted by independent researchers, suggesting industry bias [133]. Some experimental studies that are not industry-sponsored have also shown no evidence of harmful effects of WCR exposure. It is noteworthy, however, that studies employing real-life WCR exposures from commercially available devices have shown high consistency in revealing adverse effects [134].

WCR bioeffects depend on specific values of wave parameters including frequency, power density, polarization, exposure duration, modulation characteristics, as well as the cumulative history of exposure and background levels of electromagnetic, electric and magnetic fields. In laboratory studies, bioeffects observed also depend on genetic parameters and physiological parameters such as oxygen concentration [135]. The reproducibility of bioeffects of WCR exposure has sometimes been difficult due to failure to report and/or control all of these parameters. Similar to ionizing radiation, the bioeffects of WCR exposure can be subdivided into deterministic, that is, dose-dependent effects and stochastic effects that are seemingly random. Importantly, WCR bioeffects can also involve “response windows” of specific parameters whereby extremely low-level fields can have disproportionately detrimental effects [136]. This nonlinearity of WCR bioeffects can result in biphasic responses such as immune

suppression from one range of parameters, and immune hyperactivation from another range of parameters, leading to variations that may appear inconsistent.

In gathering reports and examining existing data for this paper, we looked for outcomes providing evidence to support a proposed connection between the bioeffects of WCR exposure and COVID-19. We did not make an attempt to weigh the evidence. The radiofrequency radiation exposure literature is extensive and currently contains over 30,000 research reports dating back several decades. Inconsistencies in nomenclature, reporting of details, and cataloging of keywords make it difficult to navigate this enormous literature.

Another shortcoming of this paper is that we do not have access to experimental data on 5G exposures. In fact, little is known about population exposure from real-world WCR, which includes exposure to WCR infrastructure and the plethora of WCR emitting devices. In relation to this, it is difficult to accurately quantify the average power density at a given location, which varies greatly, depending on the time, specific location, time-averaging interval, frequency, and modulation scheme. For a specific municipality it depends on the antenna density, which network protocols are used, as, for example, 2G, 3G, 4G, 5G, Wi-Fi, WiMAX (Worldwide Interoperability for Microwave Access), DECT (Digitally Enhanced Cordless Telecommunications), and RADAR (Radio Detection and Ranging). There is also WCR from ubiquitous radio wave transmitters, including antennas, base stations, smart meters, mobile phones, routers, satellites, and other wireless devices currently in use. All of these signals superimpose to yield the total average power density at a given location that typically fluctuates greatly over time. No experimental studies on adverse health effects or safety issues of 5G have been reported, and none are currently planned by the industry, although this is sorely needed. Finally, there is an inherent complexity to WCR that makes it very difficult to fully characterize wireless signals in the real world that may be associated with adverse bioeffects. Real world digital communication signals, even from single wireless devices, have highly variable signals: variable power density, frequency, modulation, phase, and other parameters changing constantly and unpredictably each moment, as associated with the short, rapid pulsations used in digital wireless communication [137]. For example, in using a mobile phone during a typical phone conversation, the intensity of emitted radiation varies significantly each moment depending on signal reception, number of subscribers sharing the frequency band, location within the wireless infrastructure, presence of objects and metallic surfaces, and “speaking” versus “non-speaking” mode, among others. Such variations may reach 100% of the average signal intensity. The carrier radiofrequency constantly changes between different values within the available frequency band. The greater the amount of information (text, speech, internet, video, etc.), the more complex the communication signals become. Therefore, we cannot estimate accurately the values of these signal parameters including ELF components or predict their variability over time. Thus, studies on the bioeffects of WCR in the laboratory can only be representative of real-world exposures [137].

This paper points to the need for further research on nonthermal WCR exposure and its potential role in COVID-19. Moreover, some of the WCR exposure bioeffects that we

discuss here — oxidative stress, inflammation, and immune system disruption — are common to many chronic diseases, including autoimmune disease and diabetes. Thus, we hypothesize that WCR exposure may also be a potential contributing factor in many chronic diseases.

When a course of action raises threats of harm to human health, precautionary measures should be taken, even if clear causal relationships are not yet fully established. Therefore, we must apply the Precautionary Principle [138] regarding wireless 5G. The authors urge policymakers to execute an immediate worldwide moratorium on wireless 5G infrastructure until its safety can be assured.

Several unresolved safety issues should be addressed before wireless 5G is further implemented. Questions have been raised about 60 GHz, a key 5G frequency planned for extensive use, which is a resonant frequency of the oxygen molecule [139]. It is possible that adverse bioeffects might ensue from oxygen absorption of 60 GHz. In addition, water shows broad absorption in the GHz spectral region along with resonance peaks, for example, strong absorption at 2.45 GHz that is used in 4G Wi-Fi routers. This raises safety issues about GHz exposure of the biosphere, since organisms are comprised of mostly water, and changes in the structure of water due to GHz absorption have been reported that affect organisms [140]. Bioeffects from prolonged WCR exposure of the whole body need to be investigated in animal and human studies, and long-term exposure guidelines need to be considered. Independent scientists in particular should conduct concerted research to determine the biological effects of real-world exposure to WCR frequencies with digital modulation from the multiplicity of wireless communication devices. Testing could also include real-life exposures to multiple toxins (chemical and biological) [141], because multiple toxins may lead to synergistic effects. Environmental impact assessments are also needed. Once the long-term biological effects of wireless 5G are understood, we can set clear safety standards of public exposure limits and design an appropriate strategy for safe deployment.

[Go to:](#)

5. Conclusion

There is a substantial overlap in pathobiology between COVID-19 and WCR exposure. The evidence presented here indicates that mechanisms involved in the clinical progression of COVID-19 could also be generated, according to experimental data, by WCR exposure. Therefore, we propose a link between adverse bioeffects of WCR exposure from wireless devices and COVID-19.

Specifically, evidence presented here supports a premise that WCR and, in particular, 5G, which involves densification of 4G, may have exacerbated the COVID-19 pandemic by weakening host immunity and increasing SARS-CoV-2 virulence by (1) causing morphologic changes in erythrocytes including echinocyte and rouleaux formation that may be contributing to hypercoagulation; (2) impairing microcirculation and reducing erythrocyte and hemoglobin levels exacerbating hypoxia; (3) amplifying immune dysfunction, including immunosuppression, autoimmunity, and hyperinflammation; (4) increasing cellular oxidative stress and the production of free radicals exacerbating

vascular injury and organ damage; (5) increasing intracellular Ca²⁺ essential for viral entry, replication, and release, in addition to promoting pro-inflammatory pathways; and (6) worsening heart arrhythmias and cardiac disorders.

WCR exposure is a widespread, yet often neglected, environmental stressor that can produce a wide range of adverse bioeffects. For decades, independent research scientists worldwide have emphasized the health risks and cumulative damage caused by WCR [42,45]. The evidence presented here is consistent with a large body of established research. Healthcare workers and policymakers should consider WCR a potentially toxic environmental stressor. Methods for reducing WCR exposure should be provided to all patients and the general population.

[Go to:](#)

Acknowledgments

The authors acknowledge small contributions to early versions of this paper by Magda Havas and Lyn Patrick. We are grateful to Susan Clarke for helpful discussions and suggested edits of early drafts of the manuscript.

[Go to:](#)

Conflict of Interest

The authors declare that they have no conflicts of interest in preparing and publishing this manuscript. No competing financial interests exist.

[Go to:](#)

References

- [1] Centers for Disease Control and Prevention. *Epidemiological Triad*. Atlanta, Georgia: Centers for Disease Control and Prevention; 2020. [[Google Scholar](#)]
- [2] Balmori A. Electromagnetic Pollution from Phone Masts. *Effects on Wildlife. Pathophysiology*. 2009;16:191–9. [[PubMed](#)] [[Google Scholar](#)]
- [3] Lin JC. 5G Communications Technology and Coronavirus Disease. *IEEE Microw Mag*. 2020;21:16–9. [[Google Scholar](#)]
- [4] Mordachev VI. Correlation between the Potential Electromagnetic Pollution Level and the Danger of COVID-19. *4G/5G/6G can be Safe for People. Doklady BGUIR*. 2020;18:96–112. [[Google Scholar](#)]
- [5] Tsiang A, Havas M. COVID-19 Attributed Cases and Deaths are Statistically Higher in States and Counties with 5th Generation Millimeter Wave Wireless Telecommunications in the United States. *Med Res Arch*. 2021;9:2371. [[Google Scholar](#)]
- [6] Ing AJ, Cocks C, Green JP. COVID-19: In the Footsteps of Ernest Shackleton. *Thorax*. 2020;75:693–4. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [7] Garg S, Kim L, Whitaker M, O'Halloran A, Cummings C, Holstein R, et al. Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019 COVID-NET 14 States, March 1-30, 2020. *MMWR Morb Mortal Wkly Rep*. 69:458–64. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]

- [8] Wu C, Chen X, Cai Y, Xia J, Zhou X, Xu S, et al. Risk Factors Associated with Acute Respiratory Distress Syndrome and Death in Patients with Coronavirus Disease. *JAMA Intern Med.* 2020;180:934–43. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [9] Gattinoni L, Chiumello D, Caironi P, Busana M, Romitti F, Brazzi L, et al. COVID-19 Pneumonia: Different Respiratory Treatments for Different Phenotypes. *Intensive Care Med.* 2020;46:1099–102. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [10] Cecchini R, Cecchini AL. SARS-CoV-2 Infection Pathogenesis is Related to Oxidative Stress as a Response to Aggression. *Med Hypotheses.* 2020;143:110102. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [11] Cavezzi A, Troiani E, Corrao S. COVID-19: Hemoglobin, Iron, and Hypoxia Beyond Inflammation, a Narrative Review. *Clin Pract.* 2020;10:1271. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [12] Bikdeli B, Madhavan MV, Jimenez D, Chuich T, Dreyfus I, Driggin E, Nigoghossian C, et al. Global COVID-19 Thrombosis Collaborative Group, Endorsed by the ISTH, NATF, ESVM, and the IUA, Supported by the ESC Working Group on Pulmonary Circulation and Right Ventricular Function. COVID-19 and Thrombotic or Thromboembolic Disease: Implications for Prevention, Antithrombotic Therapy, and Follow-Up: JACC State-of-the-Art Review. *JACC.* 2020;75:2950–73. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [13] Carfi A, Bernabei R, Landi F. Persistent Symptoms in Patients after Acute COVID-19. *JAMA.* 2020;324:603–5. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [14] CNIRP. International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines for Limiting Exposure to Electromagnetic Fields (100 kHz to 300 GHz) *Health Phys.* 2020;118:483–524. [[PubMed](#)] [[Google Scholar](#)]
- [15] Bortkiewicz A, Gadzicka E, Szymczak W. Mobile Phone Use and Risk for Intracranial Tumors and Salivary Gland Tumors A Meta-analysis. *Int J Occup Med Environ Health.* 2017;30:27–43. [[PubMed](#)] [[Google Scholar](#)]
- [16] Sangün Ö, DüNDAR B, Çömlekçi S, Büyükgebiz A. The Effects of Electromagnetic Field on the Endocrine System in Children and Adolescents. *Pediatr Endocrinol Rev.* 2016;13:531–45. [[PubMed](#)] [[Google Scholar](#)]
- [17] Yakymenko I, Tsybulin O, Sidorik E, Henshel D, Kyrylenko O, Kyrylenko S. Oxidative Mechanisms of Biological Activity of Low-intensity Radiofrequency Radiation. *Electromagn Biol Med.* 2016;35:186–202. [[PubMed](#)] [[Google Scholar](#)]
- [18] Ruediger HW. Genotoxic Effects of Radiofrequency Electromagnetic Fields. *Pathophysiology.* 2009;16:89–102. [[PubMed](#)] [[Google Scholar](#)]
- [19] Asghari A, Khaki AA, Rajabzadeh A, Khaki A. A Review on Electromagnetic Fields (EMFs) and the Reproductive System. *Electron Physician.* 2016;8:2655–62. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [20] Zhang J, Sumich A, Wang GY. Acute Effects of Radiofrequency Electromagnetic Field Emitted by Mobile Phone on Brain Function. *Bioelectromagnetics.* 2017;38:329–38. [[PubMed](#)] [[Google Scholar](#)]
- [21] Pall ML. Microwave Frequency Electromagnetic Fields (EMFs) Produce Widespread Neuropsychiatric Effects Including Depression. *J Chem Neuroanat.* 2016;75:43–51. [[PubMed](#)] [[Google Scholar](#)]
- [22] Avendano C, Mata A, Sanchez Sarmiento CA, Doncei GF. Use of Laptop Computers Connected to Internet through Wi-Fi Decreases Human Sperm Motility and

- Increases Sperm DNA Fragmentation. *Fertil Steril*. 2012;97:39–45. [[PubMed](#)] [[Google Scholar](#)]
- [23] Buchner K, Eger H. Changes of Clinically Important Neurotransmitters under the Influence of Modulated RF Fields a Long-term Study Under Real-life Conditions Umwelt Medizin Gesellschaft. 2011;24:44–57. [[Google Scholar](#)]
- [24] Navarro EA, Segura J, Portoles M, Gomez-Perretta C. The Microwave Syndrome:A Preliminary Study in Spain. *Electromagn Biol Med*. 2003;22:161–9. [[Google Scholar](#)]
- [25] Hutter HP, Moshammer H, Wallner P, Kundi M. Subjective Symptoms, Sleeping Problems, and Cognitive Performance in Subjects Living Near Mobile Phone Base Stations. *Occup Environ Med*. 2006;63:307–13. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [26] Magras IN, Xenos TD. RF Radiation-induced Changes in the Prenatal Development of Mice. *Bioelectromagnetics*. 1997;18:455–61. [[PubMed](#)] [[Google Scholar](#)]
- [27] Glaser ZR. *Project MF12.524.015-00043 Report No. 2*. Bethesda, MD: Naval Medical Research Institute; 1972. Bibliography of Reported Biological Phenomena ('Effects') and Clinical Manifestations Attributed to Microwave and Radio-Frequency Radiation Research Report; pp. 1–103. [[Google Scholar](#)]
- [28] Glaser ZR, Brown PF, Brown MS. Bibliography of Reported Biological Phenomena (Effects) and Clinical Manifestations Attributed to Microwave and Radio-Frequency Radiation:Compilation and Integration of Report and Seven Supplements. *Bethesda, MD:Naval Medical Research Institute*. 1976:1–178. [[Google Scholar](#)]
- [29] Belyaev IY, Shcheglov VS, Alipov YD, Polunin VA. Resonance Effect of Millimeter Waves in the Power Range from 10^{-19} to 3×10^{-3} W/cm² on *Escherichia coli* Cells at Different Concentrations. *Bioelectromagnetics*. 1996;17:312–21. [[PubMed](#)] [[Google Scholar](#)]
- [30] Grigoriev YG, Grigoriev OA, Ivanov AA, Lyaginskaya AM, Merkulov AV, Shagina NB, et al. Confirmation Studies of Soviet Research on Immunological Effects of Microwaves:Russian Immunology Results. *Bioelectromagnetics*. 2010;31:589–602. [[PubMed](#)] [[Google Scholar](#)]
- [31] Grigoriev Y. Mobile Communications and Health of Population:The Risk Assessment, Social and Ethical Problems. *Environmentalist*. 2012;32:193–200. [[Google Scholar](#)]
- [32] Repacholi M, Grigoriev Y, Buschmann J, Pioli C. Scientific Basis for the Soviet and Russian Radiofrequency Standards for the General Public. *Bioelectromagnetics*. 2012;33:623–33. [[PubMed](#)] [[Google Scholar](#)]
- [33] Pakhomov A, Murphy M. A Comprehensive Review of the Research on Biological Effects of Pulsed Radiofrequency Radiation in Russia and the Former Soviet Union. 2011 [[Google Scholar](#)]
- [34] Belyaev IY. Dependence of Non-thermal Biological Effects of Microwaves on Physical and Biological Variables:Implications for Reproducibility and Safety Standards. *Eur J Oncol*. 2010;5:187–218. [[Google Scholar](#)]
- [35] Franzen J. Wideband Pulse Propagation in Linear Dispersive Bio-Dielectrics Using Fourier Transforms. *United States Air Force Research Laboratory Report No. AFRL-HE-BR-TR-1999-0149*. 1999 February; [[Google Scholar](#)]
- [36] Albanese R, Penn J, Medina R. Short-rise-time Microwave Pulse Propagation through Dispersive Biological Media. *J Opt Soc Am A*. 1989;6:1441–6. [[Google Scholar](#)]

- [37] Lin-Liu S, Adey WR. Low Frequency Amplitude Modulated Microwave Fields Change Calcium Efflux Rates from Synaptosomes. *Bioelectromagnetics*. 1982;3:309–22. [[PubMed](#)] [[Google Scholar](#)]
- [38] Penafiel LM, Litovitz T, Krause D, Desta A, Mullins MJ. Role of Modulation on the Effect of Microwaves on Ornithine Decarboxylase Activity in L929 Cells. *Bioelectromagnetics*. 1997;18:132–41. [[PubMed](#)] [[Google Scholar](#)]
- [39] Huber R, Treyer V, Borbely AA, Schuderer J, Gottselig JM, Landolt HP, Werth E, et al. Electromagnetic Fields, Such as Those from Mobile Phones, Alter Regional Cerebral Blood Flow and Sleep and Waking EEG. *J Sleep Res*. 2002;11:289–95. [[PubMed](#)] [[Google Scholar](#)]
- [40] Panagopoulos DJ, Karabarounis A, Margaritis LH. Mechanism of Action of Electromagnetic Fields on Cells. *Biochem Biophys Res Commun*. 2002;298:95–102. [[PubMed](#)] [[Google Scholar](#)]
- [41] Panagopoulos DJ. Comments on Pall's Millimeter (MM) Wave and Microwave Frequency Radiation Produce Deeply Penetrating Effects:The Biology and the Physics. *Rev Environ Health*. 2021;2021:165. [[PubMed](#)] [[Google Scholar](#)]
- [42] Sage C, Carpenter DO. BioInitiative Working Group. BioInitiative Report:A Rationale for a Biologically-based Public Exposure Standard for Electromagnetic Radiation. *Updated 2014-2020*. 2012. <http://www.bioinitiative.org>.
- [43] Belpomme D, Hardell L, Belyaev I, Burgio E, Carpenter DO. Thermal and Non-thermal Health Effects of Low Intensity Non-ionizing Radiation: An International Perspective (Review) *Environ Pollut*. 2018;242:643–58. [[PubMed](#)] [[Google Scholar](#)]
- [44] Di Ciaula A. Towards 5G Communication Systems:Are there Health Implications? *Int J Hyg Environ Health*. 2018;221:367–75. [[PubMed](#)] [[Google Scholar](#)]
- [45] Russell CL. 5G Wireless Telecommunications Expansion:Public Health and Environmental Implications. *Environ Res*. 2018;165:484–95. [[PubMed](#)] [[Google Scholar](#)]
- [46] Miller AB, Sears ME, Morgan LL, Davis DL, Hardell L, Oremus M, et al. Risks to Health and Well-being from Radio-frequency Radiation Emitted by Cell Phones and Other Wireless Devices. *Public Health Front*. 2019;7:223. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [47] Pakhomov AG, Akyel Y, Pakhomova ON, Stuck BE, Murphy MR. Current State and Implications of Research on the Biological Effects of Millimeter Waves. *Bioelectromagnetics*. 1998;19:393–413. [[PubMed](#)] [[Google Scholar](#)]
- [48] Betskii OV, Lebedeva NN. *In:Clinical Application of Bioelectromagnetic Medicine*. New York: Marcel Decker; 2004. Low-intensity Millimeter Waves in Biology and Medicine; pp. 30–61. [[Google Scholar](#)]
- [49] Kostoff RN, Block JA, Solka JL, Briggs MB, Rushenberg RL, Stump JA, et al. Literature-Related Discovery:A Review. *Report to the Office of Naval Research*. 2007:1–58. [[Google Scholar](#)]
- [50] Havas M. Radiation from Wireless Technology Affects the Blood, Heart, and the Autonomic Nervous System. *Rev Environ Health*. 2013;28:75–84. [[PubMed](#)] [[Google Scholar](#)]
- [51] Rubik B. Does Short-term Exposure to Cell Phone Radiation Affect the Blood? *Wise Trad Food Farm Heal Arts*. 2014;15:19–28. [[Google Scholar](#)]
- [52] Wagner C, Steffen P, Svetina S. Aggregation of Red Blood Cells:From Rouleaux to Clot Formation. *Comput Rendus Phys*. 2013;14:459–69. [[Google Scholar](#)]

- [53] Lakhdari N, Tabet B, Boudraham L, Laoussati M, Aissanou S, Beddou L, et al. Red Blood Cells Injuries and Hypersegmented Neutrophils in COVID-19 Peripheral. *medRxiv*. 2020;2020:20160101. [[Google Scholar](#)]
- [54] Lei Y, Zhang J, Schiavon CR, He M, Chen L, Shen H, et al. SARS-CoV-2 Spike Protein Impairs Endothelial Function Via Downregulation of ACE2. *Circ Res*. 2021;128:1323–6. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [55] Zhang S, Liu Y, Wang X, Yang L, Li H, Wang Y, et al. SARS-CoV-2 Binds Platelet ACE2 to Enhance Thrombosis in COVID-19. *J Hematol Oncol*. 2020;13:120. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [56] Zalyubovskaya NP. Biological Effect of Millimeter Radiowaves. *Vrachebnoye Delo*. 1977;3:116–9. [[PubMed](#)] [[Google Scholar](#)]
- [57] Zalyubovskaya NP, Kiselev RI. Effects of Radio Waves of a Millimeter Frequency Range on the Body of Man and Animals. *Gigiyana I Sanitaria*. 1978;8:35–9. [[PubMed](#)] [[Google Scholar](#)]
- [58] Wenzhong L, Li H. COVID-19 Attacks the 1-beta Chain of Hemoglobin and Captures the Porphyrin to Inhibit Heme Metabolism. *ChemRxiv*. 2020;2020:26434. [[Google Scholar](#)]
- [59] Lippi G, Mattiuzzi C. Hemoglobin Value May be Decreased in Patients with Severe Coronavirus Disease 2019. *Hematol Transfus Cell Ther*. 2020;42:116–7. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [60] Chen L, Li X, Chen M, Feng Y, Xiong C. The ACE2 Expression in Human Heart Indicates New Potential Mechanism of Heart Injury among Patients Infected with SARS-CoV-2. *Cardiovasc Res*. 2020;116:1097–100. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [61] Algassim, AA, Elghazaly AA, Alnahdi AS, Mohammed-Rahim OM, Alanazi AG, Aldhuwayhi NA, et al. Prognostic Significance of Hemoglobin Level and Autoimmune Hemolytic Anemia in SARS-CoV-2 Infection. *Ann Hematol*. 2021;100:37–43. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [62] Ghahramani S, Tabrizi R, Lankarani KB, Kashani SMA, Rezaei S, Zeidi N, et al. Laboratory Features of Severe vs Non-severe COVID-19 Patients in Asian Populations:A Systematic Review and Meta-analysis. *Eur J Med Res*. 2020;25:30. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [63] Cheng L, Li HL, Li C, Liu C, Yan S, Chen H, et al. Ferritin in the Coronavirus Disease 2019 (COVIDvirus A Systematic Review and Meta?etaemati. *J Clin Lab Anal*. 2020;34:e23618. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [64] Tobin MJ, Laghi F, Jubran A. Why COVID-19 Silent Hypoxemia is Baffling to Physicians. *Am J Respir*. 2020;202:356–60. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [65] Ejigu T, Patel N, Sharma A, Vanjarapu JMR, Nookala V. Packed Red Blood Cell Transfusion as a Potential Treatment Option in COVID-19 Patients with Hypoxemic Respiratory Failure:A Case Report. *Cureus*. 2020;12:e8398. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [66] Varga Z, Flammer AJ, Steiger P, Haberecker M, Andermatt R, Zinkernagel AS, et al. Endothelial Cell Infection and Endotheliitis in COVID-19. *Lancet*. 2020;395:1417–8. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]

- [67] Betteridge DJ. What is Oxidative Stress? *Metabolism*. 2000;49(2 Suppl 1):3–8. [[PubMed](#)] [[Google Scholar](#)]
- [68] Giamarellos-Bourboulis E, Netea MG, Rovina N, Akinosoglou K, Antoniadou A, Antonakos N, et al. Complex Immune Dysregulation in COVID-19 Patients with Severe Respiratory Failure. *Cell Host Microbe*. 2020;27:992–1000. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [69] Hadjadj J, Yatim N, Barnabei L, Corneau A, Boussier J, Smith N, et al. Impaired Type 1 Interferon Activity and Inflammatory Responses in Severe COVID-19 Patients. *Science*. 2020;369:718–24. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [70] Dasdag S, Akdag MZ. The Link between Radiofrequencies Emitted from Wireless Technologies and Oxidative Stress. *J Chem Neuroanat*. 2016;75:85–93. [[PubMed](#)] [[Google Scholar](#)]
- [71] Higashi Y, Noma K, Yoshizumi M, Kihara Y. Endothelial Function and Oxidative Stress in Cardiovascular Diseases. *Circ J*. 2009;73:411–8. [[PubMed](#)] [[Google Scholar](#)]
- [72] Polonikov A. Endogenous Deficiency of Glutathione as the Most Likely Cause of Serious Manifestations and Death in COVID-19 Patients. *ACS Infect Dis*. 2020;6:1558–62. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [73] Guloyan V, Oganessian B, Baghdasaryan N, Yeh C, Singh M, Guilford F, et al. Glutathione Supplementation as an Adjunctive Therapy in COVID-19. *Antioxidants (Basel, Switzerland)* 2020;9:914. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [74] Marushchak M, Maksiv K, Krynytska I, Dutchak O, Behosh N. The Severity of Oxidative Stress in Comorbid Chronic Obstructive Pulmonary Disease (COPD) and Hypertension: Does it Depend on ACE and AGT Gene Polymorphisms? *J Med Life*. 2019;12:426–34. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [75] Choromanska B, Mysliwiec P, Luba M, Wojskowicz P, Mysliwiec H, Choromanska K, et al. The Impact of Hypertension and Metabolic Syndrome on Nitrosative Stress and Glutathione Metabolism in Patients with Morbid Obesity. *Oxid Med Cell Longev*. 2020;2020:1057570. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [76] Lutchmansingh FK, Hsu JW, Bennett FI, Badaloo AV, Mcfarlane-Anderson N, Gordon-Strachan GM, et al. Glutathione Metabolism in Type 2 Diabetes and its Relationship with Microvascular Complications and Glycemia. *PLoS One*. 2018;13:e0198626. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [77] Horowitz RI, Freeman PR, Bruzzese J. Efficacy of Glutathione Therapy in Relieving Dyspnea Associated with COVID-19 Pneumonia: A Report of 2 Cases. *Respir Med*. 2020;30:101063. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [78] Peraica M, Marijanovic AM, Flajs D, Domijan AM, Gajski G, Garaj-Vrhovac G. Oxidative Stress in Workers Occupationally Exposed to Microwave Radiation. *Toxicol Lett*. 2008;180:38–9. [[Google Scholar](#)]
- [79] Garaj-Vrhovac V, Gajski G, Pazanin S, Sarolic A, Domijan D, Flajs D, et al. Assessment of Cytogenetic Damage and Oxidative Stress in Personnel Occupationally Exposed to the Pulsed Microwave Radiation of Marine Radar Equipment. *Int J Hyg Environ Health*. 2011;214:59–65. [[PubMed](#)] [[Google Scholar](#)]
- [80] Zothansiana Zosangzuali M, Lalramdinpuii M, Jagetia GC. Impact of Radiofrequency Radiation on DNA Damage and Antioxidants in Peripheral Blood Lymphocytes of Humans Residing in the Vicinity of Mobile Phone Base Stations. *Electromagn Biol Med*. 2017;36:295–305. [[PubMed](#)] [[Google Scholar](#)]

- [81] Moustafa YM, Moustafa RM, Belacy A, Abou-El-Ela SH, Ali FM. Effects of Acute Exposure to the Radiofrequency Fields of Cellular Phones on Plasma Lipid Peroxide and Anti-oxidase Activities in Human Erythrocytes. *J Pharm Biomed Anal.* 2001;26:605–8. [[PubMed](#)] [[Google Scholar](#)]
- [82] Hassan NS, Rafaat BM, Aziz SW. Modulatory Role of Grape Seed Extract on Erythrocyte Hemolysis and Oxidative Stress Induced by Microwave Radiation in Rats. *Int J Integr Biol.* 2010;10:106–11. [[Google Scholar](#)]
- [83] Yurekli AI, Ozkan M, Kalkan T, Saybasili H, Tuncel H, Atukeren P, et al. GSM Base Station Electromagnetic Radiation and Oxidative Stress in Rats. *Electromagn Biol Med.* 2006;25:177–88. [[PubMed](#)] [[Google Scholar](#)]
- [84] Dasdag S, Bilgin HM, Akdag MZ, Celik H, Aksen F. Effect of Long-term Mobile Phone Exposure on Oxidative-antioxidative Processes and Nitric Oxide in Rats. *Biotechnol Biotechnol Equip.* 2008;22:992–7. [[Google Scholar](#)]
- [85] Alkis ME, Akdag MZ, Dasdag S. Effects of low?intensity Microwave Radiation on Oxidant?antioxidant Parameters and DNA Damage in the Liver of rats. *Bioelectromagnetics.* 2021;42:76–85. [[PubMed](#)] [[Google Scholar](#)]
- [86] Loscalzo J. Oxidant Stress:A Key Determinant of Atherothrombosis. *Biochem Soc Trans.* 2003;31:1059–61. [[PubMed](#)] [[Google Scholar](#)]
- [87] Tang N, Li D, Wang X, Sun Z. Abnormal Coagulation Parameters are Associated with Poor Prognosis in Patients with Novel Coronavirus Pneumonia. *J Thromb Haemost.* 2020;18:844–7. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [88] Klok FA, Kruip MJ, Van der Meer NJ, Arbous MS, Gommers DA, Kant KM, et al. Incidence of Thrombotic Complications in Critically ill ICU Patients with COVID-19. *Thromb Res.* 2020;191:145–7. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [89] Zaim S, Chong JH, Sankaranarayanan V, Harky A. COVID-19 and Multi-Organ Response. *Curr Probl Cardiol.* 2020;2020:100618. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [90] Yaghi S, Ishida K, Torres J, Mac Grory B, Raz E, Humbert K, et al. SARS-CoV-2 and Stroke in a New York Healthcare System. *Stroke.* 2020;51:2002–11. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [91] Bandara P, Weller S. Cardiovascular Disease:Time to Identify Emerging Environmental Risk Factors. *Eur J Prev Cardiol.* 2017;24:1819–23. [[PubMed](#)] [[Google Scholar](#)]
- [92] Esmekaya MA, Ozer C, Seyhan N. 900 MHz Pulse-modulated Radiofrequency Radiation Induces Oxidative Stress on Heart, Lung, Testis, and Liver Tissues. *Gen Physiol Biophys.* 2011;30:84–9. [[PubMed](#)] [[Google Scholar](#)]
- [93] Cao X. COVID-19:Immunopathology and its Implications for Therapy. *Nat Rev Immunol.* 2020;20:269–70. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [94] Qin C, Zhou L, Hu Z, Zhang S, Yang S, Tao Y, et al. Dysregulation of Immune Response in Patients with Coronavirus 2019 (COVID-19) in Wuhan, China. *Clin Infect Dis.* 2020;71:762–8. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [95] McRee DI. Soviet and Eastern European Research on Biological Effects of Microwave Radiation. *Proc IEEE.* 1980;68:84–91. [[Google Scholar](#)]
- [96] Baranski S. Effect of Chronic Microwave Irradiation on the Blood Forming System of Guinea Pigs and Rabbits. *Aerosp Med.* 1971;42:1196–9. [[PubMed](#)] [[Google Scholar](#)]

- [97] Nageswari KS, Sarma KR, Rajvanshi VS, Sharan R, Sharma M, Barathwal V, et al. Effect of Chronic Microwave Radiation on T Cell-mediated Immunity in the Rabbit. *Int.* 1991;35:92–7. [[PubMed](#)] [[Google Scholar](#)]
- [98] Adang D, Remacle C, Vander Vorst A. Results of a Long-term Low-level Microwave Exposure of Rats. *IEEE Trans Microw Theory Tech.* 2009;57:2488–97. [[Google Scholar](#)]
- [99] McRee DI, Faith R, McConnell EE, Guy AW. Long-term 2450-MHz cw Microwave Irradiation of Rabbits: Evaluation of Hematological and Immunological Effects. *J Microw Power Electromagn Energy.* 1980;15:45–52. [[Google Scholar](#)]
- [100] Johansson O. Disturbance of the Immune System by Electromagnetic Fields a Potentially Underlying Cause for Cellular Damage and Tissue Repair Reduction which Could Lead to Disease and Impairment. *Pathophysiology.* 2009;16:157–77. [[PubMed](#)] [[Google Scholar](#)]
- [101] Szmigielski S. Reaction of the Immune System to Low-level RF/MW Exposures. *Sci Total Environ.* 2013;454-455:393–400. [[PubMed](#)] [[Google Scholar](#)]
- [102] Zhou F, Ting Y, Du R, Fan G, Liu Y, Liu Z, et al. Clinical Course and Risk Factors for Mortality of Adult Inpatients with COVID-19 in Wuhan, China: A Retrospective Cohort Study. *Lancet.* 2020;395:1054–62. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [103] Yang M. Cell Pyroptosis, a Potential Pathogenic Mechanism of 2019-nCoV Infection. *ScienceOpen.* 2020 [[Google Scholar](#)]
- [104] Upadhyay J, Tiwari N, Ansari MN. Role of Inflammatory Markers in Corona Virus Disease (COVID-19) Patients: A Review. *Exp Biol Med.* 2020;245:1368–75. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [105] Shandala MG, Rudnev MI, Vinogradov GK, Belonoshko NC, Goncharova NM. Immunological and hematological effects of microwaves at low power densities. In: *Proceedings of International Union of Radio Science Symposium on Biological Effects of Electromagnetic Waves.* 84 Airlie, VA;1977 [[Google Scholar](#)]
- [106] Grigoriev YG, Ivanov AA, Lyaginskaya AM, Merkulov AV, Stepanov VS, Shagina NB. Autoimmune Processes after Long-term Low-level Exposure to Electromagnetic Fields (Experimental Results) *Part I. Mobile Communications and Changes in Electromagnetic Conditions for the Population. Need for Additional Substantiation of Existing Hygienic Standards.* *Biophysics.* 2010:551041–5. [[PubMed](#)] [[Google Scholar](#)]
- [107] Grigoriev YG. Evidence for Effects on the Immune System. Immune System and EMF RF. *Bioinitiative Rep.* 2012;8:1–24. [[Google Scholar](#)]
- [108] Szabo I, Rojavin MA, Rogers, TJ, Ziskin MC. Reactions of Keratinocytes to *In Vitro* Millimeter Wave Exposure. *Bioelectromagnetics.* 2001;22:358–64. [[PubMed](#)] [[Google Scholar](#)]
- [109] Makar V, Logani M, Szabo I, Ziskin M. Effect of Millimeter Waves on Cyclophosphamide Induced Suppression of T Cell Functions. *Bioelectromagnetics.* 2003;24:356–65. [[PubMed](#)] [[Google Scholar](#)]
- [110] Walleczek J. Electromagnetic Field Effects on Cells of the Immune System: The Role of Calcium Signaling. *FASEB J.* 1992;6:3177–85. [[PubMed](#)] [[Google Scholar](#)]
- [111] Panagopoulos DJ, Messini N, Karabarounis A, Filippetis AL, Margaritis LH. A Mechanism for Action of Oscillating Electric Fields on Cells. *Biochem Biophys Res Commun.* 2000;272:634–40. [[PubMed](#)] [[Google Scholar](#)]

- [112] Pall ML. Electromagnetic Fields Act Via Activation of Voltage-gated Calcium Channels to Produce Beneficial or Adverse Effects. *J Cell Mol Med*. 2013;17:958–65. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [113] Chen X, Cao R, Zhong W. Host Calcium Channels and Pumps in Viral Infections. *Cells*. 2019;9:94. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [114] Solaimanzadeh I. Nifedipine and Amlodipine are Associated with Improved Mortality and Decreased Risk for Intubation and Mechanical Ventilation in Elderly Patients Hospitalized for COVID-19. *Cureus*. 2020;12:e8069. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [115] Straus MR, Bidon M, Tang T, Whittaker GR, Daniel S. FDA Approved Calcium Channel Blockers Inhibit SARS-CoV-2 Infectivity in Epithelial Lung Cells. *BioRxiv*. 2020;2020:214577. [[Google Scholar](#)]
- [116] Sen CK, Roy S, Packer L. Involvement of Intracellular Ca²⁺ in Oxidant-Induced NF-κB Activation. *FEBS Lett*. 1996;385:58–62. [[PubMed](#)] [[Google Scholar](#)]
- [117] Do LA, Anderson J, Mulholland EK, Licciardi PV. Can Data from Paediatric Cohorts Solve the COVID-19 Puzzle? *PLoS Pathog*. 2020;16:e1008798. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [118] Atri D, Siddiqi HK, Lang JP, Nauffal V, Morrow DA, Bohula EA. COVID-19 for the Cardiologist: Basic Virology, Epidemiology, Cardiac Manifestations, and Potential Therapeutic Strategies. *JACC Back Transl Sci*. 2020;5:518–36. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [119] Dherange P, Lang J, Qian P, Oberfeld B, Sauer WH, Koplan B, et al. Arrhythmias and COVID-19: A Review. *JACC Clin Electrophysiol*. 2020;6:1193–204. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [120] Colon CM, Barrios JG, Chiles JW, McElwee SK, Russell DW, Maddox WR, et al. Atrial Arrhythmias in COVID-19 Patients. *JACC Clin Electrophysiol*. 2020;6:1189–90. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [121] Gökmen N, Erdem S, Toker KA, Ocmen E, Ozkure A. Analyzing Exposures to Electromagnetic Fields in an Intensive Care Unit. *Turk J Anaesthesiol Reanim*. 2016;44:236–40. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [122] Sandoval Y, Januzzi JL, Jaffe AS. Cardiac Troponin for Assessment of Myocardial Injury in COVID-19. *J Am Coll Cardiol*. 2020;76:1244–58. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [123] Dodge CH. Clinical and Hygienic Aspects of Exposure to Electromagnetic Fields. Biological Effects and Health Implications of Microwave Radiation. A Review of the Soviet and Eastern European Literature. In: *Symposium Proceedings, Richmond, VA*. 1969 Sep 17 [[Google Scholar](#)]
- [124] Jauchem JR. Exposure to Extremely Low Frequency Electromagnetic Fields and Radiofrequency Radiation: Cardiovascular Effects in Humans. *Int Arch Occup Environ Health*. 1997;70:9–21. [[PubMed](#)] [[Google Scholar](#)]
- [125] Black DR, Heynick LN. Radiofrequency Effects on Blood Cells Cardiac, Endocrine, and Immunological Functions. *Bioelectromagnetics*. 2003;6:S187–95. [[PubMed](#)] [[Google Scholar](#)]
- [126] Havas M, Marrongelle J, Pollner B, Kelley E, Rees CRG, Tully L. Provocation Study Using Heart Rate Variability Shows Microwave Radiation from 2.4GHz Cordless

- Phone Affects Autonomic Nervous System. *Eur J Oncol Library*. 2010;5:271–98. [[Google Scholar](#)]
- [127] Sali L, Hanini A, Smirani C, Azzouz I, Sakly M, Abdelmelek H, et al. Effects of Acute Exposure to WIFI Signals (2.45GHz) on Heart Variability and Blood Pressure in Albino Rabbits. *Environ Toxicol Pharmacol*. 2015;40:600–5. [[PubMed](#)] [[Google Scholar](#)]
- [128] Cleary SF. Biological Effects and Health Implications of Microwave Radiation. A Review of the Soviet and Eastern European Literature. *In: Symposium Proceedings, Richmond, VA 1969 Sep 17. BRH/DBE Report No. 70-2*. 1970 [[Google Scholar](#)]
- [129] Fiasca F, Minelli M, Maio D, Minelli M, Vergallo I, Necozone S, et al. Associations between COVID-19 Incidence Rates and the Exposure to PM2.5 and NO₂: A Nationwide Observational Study in Italy. *Int J Environ Res Public Health*. 2020;17:9318. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [130] Hoyt JR, Langwig KE, Sun K, Parise KL, Li A, Wang Y, et al. Environmental Reservoir Dynamics Predict Global Infection Patterns and Population Impacts for the Fungal Disease White-nose Syndrome. *PNAS*. 2020;117:7255–62. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [131] Federal Communications Commission (FCC). Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation. *FCC96-326;ET Docket No. 93-62*. 1996 [[Google Scholar](#)]
- [132] Belyaev I, Dean A, Eger H, Hubmann G, Jandrisovits R, Kern M, et al. EUROPAEM EMF Guideline 2016 for the Prevention, Diagnosis and Treatment of EMF-related Health Problems and Illnesses. *Rev Environ Health*. 2016;31:363–97. [[PubMed](#)] [[Google Scholar](#)]
- [133] Huss A, Egger M, Hug K, Huwiler-Muntener K, Roosli M. Source of Funding and Results of Studies of Health Effects of Mobile Phone Use: Systematic Review of Experimental Studies. *Environ Health Perspect*. 2007;115:14. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [134] Panagopoulos DJ. Comparing DNA Damage Induced by Mobile Telephony and Other Types of Man-made Electromagnetic Fields. *Mutat Res*. 2019;781:53–62. [[PubMed](#)] [[Google Scholar](#)]
- [135] Belyaev IY, Shcheglov VS, Alipov ED, Ushalov VD. Nonthermal Effects of Extremely High-frequency Microwaves on Chromatin Conformation in cells *In Vitro* Dependence on Physical, Physiological, and Genetic Factors. *IEEE Trans Microw Theory Techn*. 2000;48:2172–9. [[Google Scholar](#)]
- [136] Blackman CF, Kinney LS, Houyse DE, Joines WT. Multiple Power-density Windows and their Possible Origin. *Bioelectromagnetics*. 1989;10:115–28. [[PubMed](#)] [[Google Scholar](#)]
- [137] Panagopoulos DJ, Cammaerts MC, Favre D, Balmori A. Comments on Environmental Impact of Radiofrequency Fields from Mobile Phone Base Stations. *Crit Rev Environ Sci Technol*. 2016;46:885–903. [[Google Scholar](#)]
- [138] Kriebel D, Tickne J, Epstein P, Lemons PJ, Levins R, Loechler EL, et al. The Precautionary Principle in Environmental Science. *Environ Health Perspect*. 2001;109:871–6. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [139] Tretyakov MY, Koshelev MA, Dorovskikh VV, Makarov DS, Rosenkranz PW. 60-GHz Oxygen Band: Precise Broadening and Central Frequencies of Fine-Structure

Lines, Absolute Absorption Profile at Atmospheric Pressure, and Revision of Mixing Coefficients. *J Mol Spectrosc.* 2005;231:1–14. [[Google Scholar](#)]

[140] Torgomyan H, Kalantaryan V, Trchounian A. Low Intensity Electromagnetic Irradiation with 70.6 and 73 GHz Frequencies Affects *Escherichia coli* Growth and Changes Water Properties. *Cell Biochem Biophys.* 2011;60:275–81. [[PubMed](#)] [[Google Scholar](#)]

[141] Kostoff RN, Heroux P, Aschner M, Tsatsakis A. Adverse Health Effects of 5G Mobile Networking Technology Under Real-life Conditions. *Toxicol Lett.* 2020;323:35–40. [[PubMed](#)] [[Google Scholar](#)]

- [J Clin Transl Res. 2021 Oct 26; 7\(5\): 666–681.](#)

»

- Evidence for a connection between COVID-19 and exposure to radiofrequency radiation from wireless communications including 5G

2021 Oct 26; 7(5): 666–681.

Published online 2021 Sep 29.

Evidence for a connection between COVID-19 and exposure to radiofrequency radiation from wireless communications including 5G

[Copyright and License information Disclaimer](#)

Beverly Rubik, Robert R. Brown

Corresponding author: Beverly Rubik *College of Integrative Medicine & Health Sciences, Saybrook University, Pasadena CA; Institute for Frontier Science, Oakland, CA, USA*

Handling editor:

Michal Heger

Department of Pharmaceutics, Utrecht University, the Netherlands Department of Pharmaceutics, Jiaxing University Medical College, Zhejiang, China

Review timeline:

Received: 10 March, 2021

Editorial decision: 12 May, 2021

Revision received: 11 June, 2021

Editorial decision: 28 June, 2021

Revision received: 28 July, 2021

Editorial decision: 03 August, 2021

Revision received: 25 August, 2021

Editorial decision: 25 August, 2021

Published online: 29 September, 2021

1st Editorial decision:

11-June-2021

Ref.: Ms. No. JCTRes-D-21-00034

Evidence for a Connection between COVID-19 and Exposure to Radiofrequency Radiation from Wireless Telecommunications Including Microwaves and Millimeter Waves Original Research Paper Journal of Clinical and Translational Research

Dear Dr. Rubik,

Reviewers have now commented on your paper. You will see that they are advising that you revise your manuscript. If you are prepared to undertake the work required, I would be pleased to reconsider my decision.

For your guidance, reviewers' comments are appended below.

If you decide to revise the work, please submit a list of changes or a rebuttal against each point which is being raised when you submit the revised manuscript. Also, please ensure that the track changes function is switched on when implementing the revisions. This enables the reviewers to rapidly verify all changes made.

Your revision is due by Jun 11, 2021.

To submit a revision, go to <https://www.editorialmanager.com/jctres/> and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely
Michal Heger
Editor-in-Chief

Concluding statement by Pastor Bob Reid

The paper presented above by its co-authors may be the first to challenge what began with the World Health Organization declared Covid-19 pandemic; and, hopefully others will brave the threats by powerful forces that intimidate, threaten research grant for future research, or careers if they will not go along to get along. The video link below shows that the Covid-19 scam is part of a WHO 10-year plan to have a decade of viruses.

[Video: The Plan. WHO Plans to Have 10 Years of Pandemics \(2020-2030\). "Proof that the Pandemic was Planned with a Purpose"](#)

I have spent at least 12,000 hours of research in the past four years on the issue of Wireless EMR/EMF relative to its affects and harm to life, human, animal, plant, and otherwise. I am a victim of Wi-Fi radiation poisoning. Being retired and home-bound, I have had the time to do the work to unearth the reports, evidence, and data which confirms that the Coronavirus later tagged as Covid-19 is an **"Euphemism for Radiation Poisoning"**.

The power elite of the world, such as Klaus Schwab, Prince Charles of Wales, Bill and Melinda Gates, the Black Nobility, and the international banking cartel headed up by the House of Rothschild and the Committee of 300 have been active in developing technologies that have been in use to depopulate the world of billions of people that are a threat to the Global New World Order. They decided decades ago to acquire "Quiet Weapons for Silent Wars" for the purpose of reducing the world's population. It was the breakthrough discovery of CRISPR in 2012 that has provided the world elite with the 'where-with-all' to achieve their goal through bioweapons masked as vaccines.

There is abundant evidence documenting work funded by the U.S. NIH, CDC, NIAID, WHO, the UNC at Chapel Hill, NC, Harvard University, and the Eco-Health Alliance led by Peter Daszak of the UK. I am never surprised to find out in my research inevitably the name of Jacob or Nathan Rothschild, and family appears in the big picture. For example, Bill Gates and Richard Rothschild hold patents related to Coronavirus or Covid-19 issued years before the World Health Organization declared Covid-19 outbreaks a Pandemic in March, 2020.

The genetic sequencing with CRISPR has great promise for many well-known diseases; however, it has great potential for doing harm in the hands of unethical and evil forces when weaponized to damage or even destroy life. The December, 2020 issue of *'Entangled Magazine'* published the proof in an early 2020 study that Covid-19 was a Retrovirus. The Coronavirus was weaponized by the insertion of HIV1 in three locations of the genome and one insertion of SARS-Cov2. Covid-19 is not a virus, it is a "bioweapon" and it was first discovered by a group of Indian scientists. Their work was retracted under pressure by Dr. Anthony Fauci of being denied future research grant funds. The team of Indian scientists worked for IBM's subsidiary in India; and their work was confirmed and validated by none other than the Nobel Peace Prize recipient in 2008, Dr. Luc Montagnier, who discovered HIV1 some two decades earlier. Dr. Luc Montagnier died at the age of 89 on February 8th, 2022.

The web site America Intelligence Media provided the above research on Dr. Albert Bourla, CEO of Pfizer Pharmaceutical, and the links between The Pilgrim Society, British Zionism, and the House of Rothschild.

First, it was the U.S. courts, now it is the foreign courts.

Judge Alejandro Recarey has demanded that Uruguay's national government – the Uruguayan President's office, the Ministry of Health Services Administration, the Ministry of Public Health, and Pfizer appear in court on Wednesday.

Judge Recarey is demanding they disclose the exact components of the Covid-19 vaccine. He has given them 48 hours to submit their documentation while his court deals with an injunction request to halt Covid vaccinations for children aged 5 and over.

The court wants to know if there is "graphene oxide" or "nanotechnological elements," and any data demonstrating the "innocuousness" of "the substance called messenger RNA" and "the experimental nature" of the vaccines accreditation.

The judge also is demanding explanations as to whether studies have been conducted "to explain the notorious increase in deaths due to Covid-19 as of March 2021 in relation to the previous year," and the parties must explain the adverse effects for the general population, and children specifically.

The Uruguayan government executive branche must also submit all contractual information related to any clauses of civil indemnity or criminal impunity of the suppliers in the event of adverse effects.

In January 2022, as a result of a Freedom of Information request, [Judge Mark Pittman ordered the FDA](#) to release Pfizer documents monthly until all of their documents are released to the public.

The most important take away from this article is that under no circumstances should you be tested for a virus, and take no “gene” therapy being promoted under the guise it is a vaccine. Since Pfizer and Moderna are talking an oral pill, it would be a wise choice to avoid their attempts to make it seem less toxic.

Blessings,

Pastor Bob, EvanTeachr@aol.com
www.pastorbobreid.com